

April 6, 2012

Volume 34 Number 7

www.processor.com

Address Changes: (800) 334-7458 or Fax: (402) 479-2193
Advertising Sales: (800) 247-4880 or Fax: (402) 479-2104

PROCESSOR

Products, News & Information Data Centers Can Trust. Since 1979

Custom-Built Solutions For Public & Private Clouds

Chenbro Can Build A Chassis For Any Cloud Environment

AT CHENBRO, innovation is one of the primary goals. For 30 years, the company has either ushered in new technologies or found ways to improve upon existing ones. With cloud computing, Chenbro found a need that wasn't being addressed: an easy way to purchase every piece of infrastructure necessary for a virtual environment with enough flexibility to grow alongside the business. And so Chenbro built a series of products designed to fulfill that need.

"We have multiple product lines suited for cloud computing and provide one-stop purchasing for customers, from PC to server chassis solutions," says Ares Lee, product manager at Chenbro (www.chenbro.com). "With modular design, we can meet particular conditions, application environments, and requirements based on our previous experience and research and development."

Chenbro's PC chassis combined with its 1U, 2U, and 4U rackmount chassis can help meet the individual needs of SMBs and large enterprises alike. Plus, with Chenbro's focus on modular design and customization, you can personalize a product specifically for your company rather than building one yourself using separate pieces of equipment.



Chenbro Cloud-Based PC & Server Chassis

Chenbro's line of cloud-based 1U, 2U, and 4U chassis and server solutions provide the performance, reliability, and flexibility that SMBs and enterprises need to support both public and private cloud environments. Many chassis models share the same base, so companies can customize already-deployed chassis with multiple bay configurations and support for additional 6Gbps ports.

other areas. "Chenbro products are ideally suited for data center environments," Lee says. "We know what the data center customer wants and what solutions are widely used in data centers. Chenbro has years of experience and can utilize this knowledge for data center customers."

The key to supporting private and public clouds lies in the flexibility of Chenbro's chassis. A company can use the same chassis base for multiple configurations. For instance, a company with a smaller private cloud may need a 24-bay


Unique Configurations & In-Depth Customization

Chenbro manufactures a few different server chassis models designed specifically for cloud environments. The 1U models are the RM13702 and the RM13704, which support either 2-bay or 4-bay 3.5-inch configurations as well 2-port or 4-port 6Gbps SATA backplanes. The 2U models are the RM23508, RM23512, and the RM23524, which support 6Gbps Mini-SAS (with or without an expander

Chenbro's in-house engineers all have at least 10 to 15 years of chassis designing experience, and the parts used to make the chassis are built using a hard-tooling technique that makes them higher quality and less expensive than soft-tooled alternatives. Chenbro also has a large database comprising thousands of parts that can be used to customize individual chassis and meet the unique requirements of individual companies.

Advanced Testing For Ultimate Durability

One of the most important factors when purchasing a chassis is durability and reliability. After all, a chassis is designed to house and protect the inner components of a server or PC. To help ensure the highest possible quality and life span of its products, Chenbro performs in-house thermal and vibration testing on all of its products.

"A customer can provide the exact specifications of their system for the best possible configuration for testing," Lee says. After the testing phase, Chenbro will send you a product that will not only meet your current needs, but also maintain its high level of performance for years to come. 

Contact: (909) 947-3200
www.chenbro.com

"We have multiple product lines suited for cloud computing and provide one-stop purchasing for customers, from PC to server chassis solutions."

- Chenbro's Ares Lee

Support For Any Cloud Environment

Chenbro understands that not every cloud environment is exactly the same, just as no two companies are exactly the same. The company built its cloud-based solutions to support both public and private clouds based on its experience with customers in local government, medical, homeland security, online retailers, and

4U chassis, while an enterprise with a large-scale public cloud might need a 48-bay chassis. This same modularity allows Chenbro chassis to grow alongside the company, helping you meet your current needs but being flexible enough to adapt to future needs, as well. Instead of purchasing an entirely new product, you can switch out a few components with less hassle and expense.

depending on the model) and eight, 12, or 24 bays. And the larger 4U models, comprising the RM41824, RM41848, RM41736, and RM41772, have many of the same features as the 2U models but with additional support for larger bay configurations. Similar-sized models often share the same chassis base and can be configured or reconfigured based on company needs at the time.

Subscribe Today/Address Change Form

PLEASE PRINT

What type of subscription request is this? ☐ New ☐ Renewal ☐ Cancel

Phone: (_____) _____ Fax: (_____) _____

Contact Name: _____

Company Name: _____

Address: _____

City: _____ State: _____ Postal Code: _____

Country: _____

Email: _____ Web Address: _____

1. What is the size of your company (how many employees)?

- ☐ Less than 10
- ☐ 10 to 99
- ☐ 100 to 199
- ☐ 200 to 499
- ☐ 500 to 999
- ☐ 1,000+

2. How often do you purchase computer hardware/software?

- ☐ Weekly
- ☐ Bi-weekly
- ☐ Monthly
- ☐ Quarterly
- ☐ Annually
- ☐ No Involvement

3. What is your annual computer hardware/software purchasing budget?

- ☐ \$0 to \$9,999
- ☐ \$10,000 to \$24,999
- ☐ \$25,000 to \$49,999
- ☐ \$50,000 to \$99,999
- ☐ \$100,000 to \$249,999
- ☐ \$250,000 to \$499,999
- ☐ \$500,000 to \$999,000
- ☐ \$1,000,000+

For address change, fill out form below with new information and mail or fax.

PROCESSOR

© Copyright 2012 Sandhills Publishing Company. All rights reserved.

Subscriptions

Mail Form To: P.O. Box 82545 • Lincoln, NE 68501-2545
Overnight Delivery: 120 West Harvest Drive • Lincoln, NE 68521
(800) 334-7458 | LOCAL: (402) 479-2132 | FAX: (402) 479-2193

Advertising & Reprints

(800) 247-4880 | (402) 479-2141 | FAX: (402) 479-2104

Editorial Staff

editor@processor.com • (800) 544-1264

Do you have a new product that data center/IT managers would be interested in learning about? Call (800) 544-1264 or email press@processor.com.

Scan this QR Code with your mobile smartphone to see our website.



www.Processor.com

News

Oracle Posts Mixed Financial Results, Expects Growth In Q4

Oracle released its third-quarter financial results, which showed growth in net income but a drop in hardware systems revenue. The company's net income rose 18% during the quarter, and revenues climbed 3%; however, its hardware systems revenues saw a 16% drop to \$869 million. Oracle remains optimistic about the next quarter, citing growth in new software license revenues, which climbed 7% to \$2.4 billion, and predicting fourth-quarter hardware revenue of \$870 million to \$980 million. The company maintains that it is not interested in competing in the commodity hardware market, choosing instead to focus on specialized systems.

Apple Sells 3 Million Third-Gen iPads In First Weekend

According to numbers from Apple, the company sold 3 million of its third-generation iPad tablets in the first weekend following the devices' release. The sales represent the strongest iPad launch yet, according to Philip Schiller, Apple's senior vice president of worldwide marketing, who cites the device's Retina display, quad-core processor, and full HD video capabilities as big draws for consumers. The first iteration of the ubiquitous tablet was released in the spring of 2010, and iPads now account for the vast majority of tablet sales.



HP To Combine Printer & PC Divisions

HP has announced plans to combine its printer and PC divisions into one business unit in an

effort to improve performance and encourage growth. Specifically, the Imaging and Printing Group and the Personal Systems Group will combine to form the Printing and Personal Systems Group, which will be headed by Todd Bradley, who has been the executive vice president of the Personal Systems Group since 2005. As part of the reorganization, Vyomesh Joshi, executive vice president of the Imaging and Printing Group, will retire from his position. HP's Imaging and Printing Group brought in \$6.3 billion in the last quarter, while the Personal Systems Group—responsible for laptops and PCs—brought in \$8.9 billion; the two divisions are responsible for about half of HP's total sales. The company plans to make several other reorganizational changes in an effort to increase efficiency, drive innovation, and improve customer experience.

October Launch Expected For Windows 8

Though Microsoft has made no official announcement yet, Bloomberg is reporting that the company will release its new Windows operating system, Windows 8, in October. Bloomberg says the tech giant will wrap up production of the new OS over the summer, and it's likely the company will mimic the October release of Win8's predecessor, Windows 7, which was released on Oct. 22, 2009. Win8's release is a big one for Microsoft, with the operating system's tablet version aimed at making a dent in Apple's sizeable domination of the tablet market; a version for traditional PCs will also be available.

EMC Buys Pivotal Labs

Storage company EMC announced that it has acquired software developer Pivotal Labs.

Pivotal Labs is known for its Pivotal Tracker, a software application that allows developers to collaborate remotely to speed up software development. It also makes software for mobile, enterprise, and Web businesses such as Twitter, Groupon, and Best Buy. The acquisition is an effort on EMC's part to strengthen its software development abilities in order to be better able to offer its hardware platforms as services and to successfully leverage cloud computing, Big Data, and social and mobile platforms in the development of next-generation applications. The acquisition is an all-cash transaction, though specific numbers have not been released.

Groups Sued Over Mobile Apps

A number of big-name companies, including Facebook, Apple, and Twitter, are the subjects of a class-action suit concerning invasion of privacy filed in the U.S. District Court for the Western District of Texas. In all, 18 companies have been named in the suit, which alleges that the companies surreptitiously gathered data from the address books of millions of smartphone users. The plaintiffs hope to earn a permanent injunction against this type of data collection and seek the destruction of all such personal data that's already been collected by the defendants. The suit takes much of its inspiration from an article that appeared in The New York Times, which highlighted the data collection practices.

Study Highlights Benefits Of IT Trade Pact Expansion

A new study from the ITIF (Information Technology and Information Foundation) shows that expanding the ITA (Information Technology Agreement), launched in 1996, could be a major boon to the U.S. economy—to the tune of 60,000 new jobs and a \$10 billion increase in U.S. IT firms' revenues. Currently, a number of significant types of products are not covered in the ITA, including DRAM chips, DVD players, GPS devices, and flat-panel displays, many of which were not available when the ITA was first drafted. Expanding the trade pact to include these and other products would benefit other countries besides the United States, the ITIF says; more than 70 companies have signed the agreement, and developing countries account for more than 40% of ITA membership.

Security Test Finds DNSSEC Holes In 40% Of U.S. Government Web Sites

About 40% of federal government agencies, such as the Department of Defense and the CIA, are lagging in the deployment of DNSSEC (DNS Security Extensions) on their Web sites, a recent study found. Implementation of the DNSSEC security

standard was mandated by the Office of Management and Budget, with a deadline for compliance set for Dec. 31, 2009; however, three years later, only about 60% of government Web sites were found to be in compliance in security tests conducted by DNS vendor Secure64 and the National Institute of Standards and Technology. DNSSEC provides an extra layer of authentication that prevents hackers from redirecting Web traffic to bogus sites.

Mobile Threats Surge To Record High

According to Kaspersky, malicious threats targeting mobile devices have significantly increased; specifically, 2011 saw six times the number of threats than 2010. The popular Android platform is seemingly the most susceptible to attack; according to Kaspersky, the Android OS had 4,139 modifications and 126 families of mobile threats as of Jan. 1, 2012, compared to Symbian's 435 modifications and 111 families of threats. Kaspersky recorded a total of 5,255 new



modifications and 178 new families in 2011, a severe climb within the last six months of 2011, which actually totals more than all attacks that occurred over the 2004 to 2010 period. SMS Trojans pose the greatest threat, accounting for 36.6% of threats in 2011, followed by backdoors (24.2%) and spyware (20.6%).

Amazon To Acquire Kiva Systems

Online retailer Amazon announced that it is acquiring Kiva Systems for \$775 million. Based in North Reading, Mass., Kiva specializes in automated materials handling, developing software and robots used to speed up workflows in warehouses; Amazon plans to use Kiva's products in its warehouses and fulfillment centers to improve its ability to process orders faster and more efficiently. The acquisition will bolster Amazon's order fulfillment capabilities; however, whether the increased automation will result in a reduction in employees remains to be seen. The deal has been approved by shareholders at both companies and is expected to close in the second quarter of this year.

WATCH THE STOCKS

This information provides a quick glimpse of current and historical stock prices and trends for 13 major companies in the technology market.

Company	Symbol	Year Ago	March 15 \$	March 29 \$	% change from previous issue
AMD	AMD	\$8.60	\$8.25	\$8.12	▼ 1.58%
Apple	AAPL	\$348.51	\$585.56	\$609.86	▲ 4.15%
CA Technologies	CA	\$24.18	\$27.57	\$27.67	▲ 0.36%
Cisco Systems	CSCO	\$17.15	\$19.91	\$21.03	▲ 5.63%
Dell	DELL	\$14.51	\$17.35	\$16.60	▼ 4.32%
Google	GOOG	\$586.76	\$621.13	\$648.41	▲ 4.39%
HP	HPQ	\$40.97	\$24.40	\$23.51	▼ 3.65%
IBM	IBM	\$163.07	\$206	\$208.27	▲ 1.1%
Intel	INTC	\$20.18	\$27.75	\$28.16	▲ 1.48%
LinkedIn	LNKD	n/a	\$92.40	\$102.67	▲ 11.11%
Microsoft	MSFT	\$25.39	\$32.85	\$32.12	▼ 2.22%
Oracle	ORCL	\$33.43	\$30.06	\$29.30	▼ 2.53%
Red Hat Software	RHT	\$45.39	\$50.73	\$61.43	▲ 21.09%
Symantec	SYMC	\$18.54	\$18.19	\$18.40	▲ 1.15%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

SUPERMICR[®]

Intel[®] Xeon[®] Processor E5-2600 Series

Twin Architecture

High-Performance, High Density, Server Platforms for Enterprise, HPC and Cloud Computing

Highest Performance-per-Watt/per-Dollar

- **Broadest Spectrum of Twin Products** with 3.5" and 2.5" SAS2 / SATA3 HDDs
- Up to 16 DIMMs and 512GB DDR3 Memory
- 56Gb/s ConnectX FDR InfiniBand
- Server Management with onboard IPMI 2.0 / Dedicated LAN
- (95%) Platinum Level Digital Power Supplies
- **New** Dual Intel[®] Xeon[®] Processor E5-2600 Family

Twin Innovation

Supermicro's patented Twin Technology is the foundation of the most advanced server platforms for Enterprise, Data Center and Cloud Computing applications. These high-performance, high-density systems feature optimum airflow designs for energy-efficient cooling, easy maintenance and high-availability with hot-swappable nodes and redundant power supply modules and the latest CPU and interconnect technologies for maximum processing performance and data throughput.

X9DRT Series
Motherboard Inside



1U Twin[®]
SS1027TR-TFF / TQF / TF
2 DP Nodes in 1U



(Front View)



(Rear View)

2U Twin²
SS6027TR-H Series
4 Hot-Swappable DP Nodes in 2U



(Front View)

(Rear View)

2U Twin
SS2027TR-D Series
2 Hot-Swappable DP Nodes in 2U

IDF2012

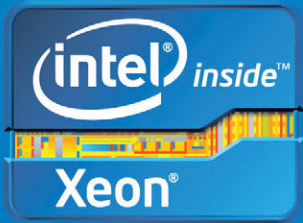
2012 IDF Beijing

Intel Developer Forum

China National Convention Center
No. 7 Tianchen East Road, Chaoyang District
Beijing, 100105 China

Come visit our booth @ GS02

April 11-12th




We Power the Cloud
www.supermicro.com/X9

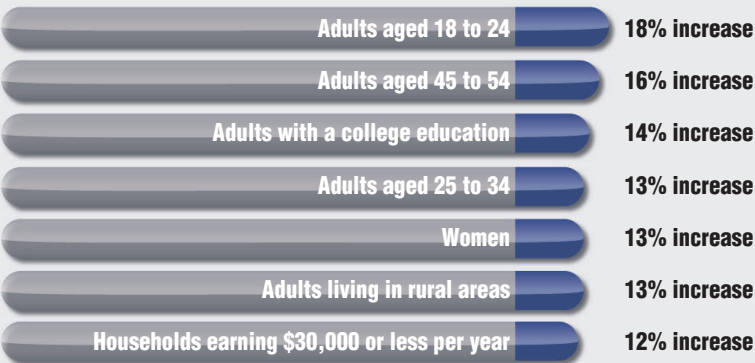


STATS & FACTS

PROVIDING THE LATEST INSIGHT & INFORMATION
FROM LEADING RESEARCH FIRMS

More Smartphones vs. Feature Phones In U.S.

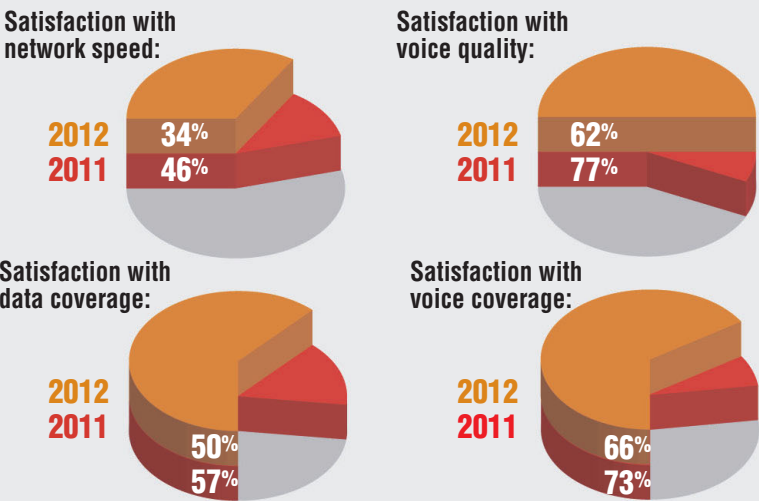
According to research from the Pew Internet and American Life Project, smartphones are now more prevalent than feature phones among U.S. adults who own mobile devices. The survey revealed that 88% of all American adults own a cell phone, with 46% owning a smartphone. The operating systems most used in the United States include Android (20%), iOS (19%), and BlackBerry (6%). Here is a breakdown of the demographics most helping to strengthen smartphone ownership year over year:



Smartphone Data Demand Drives Consumer Satisfaction Down

According to iPass, due to the popularity of smartphones and the increased consumption of data, consumers are less and less satisfied with their cellular mobile networks. About 62% of those surveyed in a recent iPass study said they are satisfied with their mobile carriers' coverage—a 25% drop from the year before. Wireless data traffic increased 111% year over year, according to the CTIA, which largely contributes to the lower-than-expected quality of service. Below is a look at several factors affecting user satisfaction and the changes in ratings year over year:

Year vs. percentage of satisfied consumers:



Apple Announces Dividend & Stock Buyback

Apple announced it will pay out dividends starting in the fiscal fourth quarter and buy back \$10 billion of the company's shares. The plan will happen over the course of the next three years; stockholders can expect to receive \$2.65 per share starting in July. Apple has not paid a dividend since 1995. The company currently holds nearly \$100 billion in cash after overwhelming success of its iPad, iPhone, iPod, and Mac devices. The dividend payout will cost about \$2.5 billion each quarter, according to the company; Apple estimates it will spend \$45 billion of its cash holdings through 2015. Buzz surrounding the announcement led to a record high price per share of \$601.10.

IDC Report: Disk Storage Market Makes Q4 Gains

According to IDC's quarterly report on disk storage systems, fourth-quarter revenues in the market reached more than \$8.5 billion—a 3.5% increase year over year. The disk storage system capacity (in terms of total devices shipped) increased 22.4% from the same time last year, reaching 6,279 petabytes. EMC is the No. 1 external disk storage maker with a 29.4% share of market revenue, followed by IBM with 15.2%, NetApp with 11.2%, and HP with 10.3% of the market. Global factory revenues rose 10.6% year over year in the external disk storage systems market, reaching \$23.5 billion total in 2011.

Personal Cloud To Overtake PCs, Gartner Says

According to research from Gartner, the personal cloud experience, which will be accessible by multiple devices in a single user's arsenal, will supersede the personal computer by 2014. Gartner says consumer cloud services will be integrated into 90% of all consumer devices by 2015. Such services will allow users to sync, store, stream, and share content with others using several devices, such as tablets, smartphones, PCs, and televisions. Google, Amazon, Apple, Microsoft, and Netflix are the current market leaders in this industry, which Gartner says will pull in \$2.2 trillion in sales of content, devices, and services. The main contributors to the personal cloud trend, according to the research firm, include consumerization, virtualization, apps, self-serviceability, and mobility.

PC Shipments To See Weak Growth

Gartner is predicting weak growth for the PC market throughout 2012, forecasting a small 4.4% increase over the course of the year. The research firm is predicting about 368 million PCs to be sold this year and sees 2013 as a slightly more successful year with an expected 400 million units to ship. Although the estimate is a small increase, the slow growth is welcomed compared to the relatively flat growth in 2011. Gartner listed the tablet market as the main inhibitor to PC sales, as it may be slowly changing computing habits among consumers; however, the release of ultrabook PCs and Windows 8 later this year will likely help the market, the company says.

IBM Optical Chip Boasts Speed & Resourceful New Tech

IBM has developed an optical chip capable of transferring data at 1Tbps. The Holey Optochip uses light pulses to speed up the transfer of data vs. using electrons through

wires. IBM expects the chip to be used in future supercomputers and data center applications. All components used to make the chip are currently commercially available, so the design could be widely used for both corporate and consumer networks. The lower-cost, higher-speed chip is eight times faster than comparable optical components currently available, according to the company. Additionally, the chip boasts a more eco-friendly power efficiency with a transceiver consuming less than 5 watts.

Big Data Needs Expected To Soar, Creating New Opportunities In The Market

According to a report from IDC, the market for big data solutions will reach \$16.9 billion by 2015, a steep climb from \$3.2 billion in 2010. IDC estimates a CAGR (compound annual growth rate) of about 40% for this industry, a rate the research firm says is seven times that of the overall information and communications tech market. IT data is growing so large that new ways to handle such large amounts of data are needed—including software, database management tools, frameworks, hardware, and software—making this a profitable industry with opportunities for startups and existing vendors, IDC says.

Report Says Chip Market Will Soon Recover

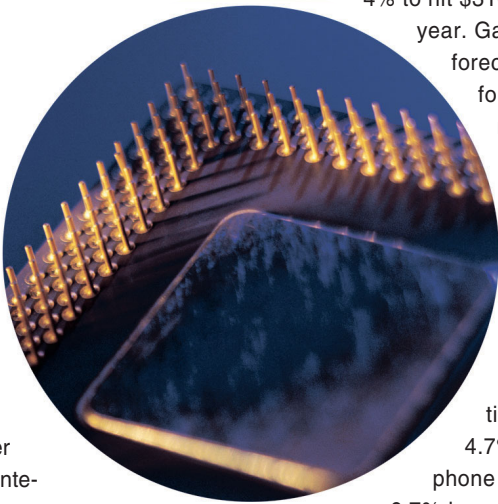
According to a recent Gartner forecast, the global semiconductor industry will increase 4% to hit \$316 billion in revenue this year. Gartner had previously forecasted a 2.2% growth for the year, but it has raised its expectations now that inventories are back to normal and the global economic outlook is stabilizing. Other markets expected to experience growth include PC unit production, with a predicted 4.7% increase; mobile phone production, with a 6.7% increase; and tablet production, with an outstanding 78% increase expected year over year. The research firm also noted that it expects 2013 to experience even greater growth rates.

Cisco To Acquire NDS Group

Cisco Systems announced it will purchase NDS Group, a digital video software and content security systems maker, for about \$5 billion. The acquisition, according to the company, will boost Cisco's own Videoscape platform and help the company to expand into emerging markets. The acquisition has been approved by both companies' boards but is subject to regulatory review before the merger can be completed. Cisco says the companies will continue to operate separately until the deal is finalized, which they expect to happen in the second half of 2012. Additionally, all NDS operations, and about 5,000 employees, will join the Cisco team.

iPad Can Help In Healthcare Field

The new third-generation iPad may enable better provider management of patient data in a healthcare setting, thanks to its Bluetooth 4.0 connectivity. With the Bluetooth option, the extremely popular tablet will now be able to offer physicians direct access to patient data without conducting complicated tests on the patient. According to the Bluetooth Special Interest Group, Bluetooth-connected devices will be able to use data collection sensor devices to find a patient's heart rate and pulse, temperature, weight, and glucose levels—making the iPad a unique and valued support tool in this industry.



■ IDC Releases 2011 Chip Market Figures

Intel continued its domination of the global microprocessor market in 2011, accounting for more than 80% of microprocessor shipments for the year, according to semiconductor researchers at IDC. Intel's rival AMD saw a slight increase in chip shipments for the year, climbing 0.7% to reach 19.7%. Overall, shipments of processor units increased 3.6% from 2010 to 2011, IDC says; revenues rose 13.2%, with the average selling price for PC microprocessors increasing more than 9% during 2011. Intel's best showing is in the server space, where its share climbed to 94.5%. AMD's share of that space is just 5.5%; however, its share of the mobile PC chip market grew to 16%.

■ T-Mobile To Start Layoffs At Call Centers

T-Mobile announced that it would cut 1,900 jobs from now through July in order to offset customer losses and the massive sums the company has invested in boosting the brand. Deutsche Telekom, T-Mobile's parent company, was unable to sell T-Mobile to AT&T after that merger was opposed by both government regulators and mobile market competitors. The company will be slashing jobs in its call centers only, as it plans to reduce the total number of call centers from 24 to 17 by July. Although some call center locations will be hiring, several centers across the United States are planned to close completely, including locations in Texas, Kansas, Colorado, Oregon, and Pennsylvania.

■ Report: Majority Of Data Breaches In 2011 Were Preventable

According to a recent report by Verizon, the majority of data breaches last year could have been prevented; the company says that 97% of the cyber attacks that took place in 2011 used simple methods. Verizon's study found for the first time that large hacker groups, such as Anonymous, accounted for more data breaches than all single breaches of personal data and financial information combined. Out of the 850 data breaches the company looked into, many occurred because the companies were not using a firewall, had ports open to the Web, or used uncomplicated and easy-to-guess passwords—all of which could have been easily prevented, according to Verizon. Additionally, the report found that larger enterprises, especially those in the finance and insurance industries, were most likely to be the victims of a targeted attack.



■ Bandwidth Usage To Increase

IDC released a report detailing worldwide mobile data usage, saying that broadband traffic will double every year through 2015 because of the high global demand. IDC also says data traffic is disproportionately distributed to users—a smaller group of users is consuming the largest amount of bandwidth. The research firm says that data usage by those users with faster broadband speeds available to them will increase based on capacity increases alone. The popularity of streaming HD video is upping the bandwidth consumption. Overall, worldwide Internet traffic will rise to about 966 exabytes per year in 2015, according to a separate report from Cisco released last year.

■ Smartphone Data Hogs Revealed

Recent tests using a Droid RAZR helped to unveil the amount of data bandwidth a smartphone activity or application uses. The results showed that movie streaming required the most data bandwidth by far, with high-definition videos eating up about double the bandwidth of standard-definition videos. Ten minutes of standard video viewing per day adds up to at least 1GB per month. Music streaming can also consume a great amount of data; for example, streaming a Pandora station for one hour each day will add up to about 1.76GB of data per month. Games, video chatting, and accessing social media sites are also within the list of top data consumers.

■ Apple Likely To Take Top Spot In Mobile Processor Market

According to an In-Stat report, Apple could soon be the largest mobile processor company worldwide by the end of the year. Intel topped the mobile processor market in 2011, but Apple was No. 2, riding on the success of the iPad and iPhone. In terms of the exact percentage of the market, Apple took a 13.5% share compared to Intel's 13.9% share. With the increasing growth rates of both tablets and smartphones, Apple is likely to catch up to Intel by the year's end, especially because Intel has virtually no presence in the smartphone processor market.

■ Google's New Privacy Policy Sparking Questions

Following Google's release of its new privacy policy, European Union regulators are demanding that the company answer questions about the new policy. In particular, the French National Commission on Computing and Liberty is requesting that Google make known which services it processes in terms of credit card data, device-specific information, telephony logs, GPS or location information, and any other unique device identifiers. Although Google has no obligation to answer the many questions from the commission, all responses (if answered) would be confidential unless Google wanted the information released to the public.

■ DARPA In Search Of Monitoring Technologies To Use In The Arctic

DARPA (the Defense Advanced Research Projects Agency) is researching options for monitoring conditions in the Arctic region as polar ice caps melt and shipping activity increases in the region. The agency is looking into environmentally friendly sensor technology that can monitor the area above and below the ice while eliminating the need for more expensive means, such as manned ships or submarines, aircraft, or satellites. DARPA is looking for two types of technology in particular: surface awareness, which uses ice distribution and narrow passage-ways to keep the waters safe, and under-ice awareness, which analyzes under-ice acoustic propagation and noise to enable the use of unmanned autonomous systems.

■ Offshoring Greatly Contributing To Declining Number Of IT Jobs

According to consulting firm The Hackett Group, IT jobs at large enterprises are dwindling in number as many of those jobs are moved to other countries. Offshoring has significantly affected the IT hiring market; the firm estimates that the number of jobs in the main fields affected by offshoring (human resources, finance, procurement, and IT) will fall from 8.2 million (reached in 2002) to 4.5 million in 2016. Currently, Hackett estimates that there are about 1.8 million U.S. and European IT jobs represented in its recent report, but 270,000 of those jobs will be moved offshore by 2016. The declining number of U.S.-based IT personnel is "completely attributable to offshoring," according to the firm.

■ Cost Of Data Breaches Down In 2011

According to the Ponemon Institute's seventh annual U.S. Cost of a Data Breach report, the average cost of a data breach fell 24% from 2010 to 2011—down from \$7.2 million to \$5.5 million—marking the first time in seven years that the institute has seen a decline in costs. A number of factors contributed to the decrease, researchers say: The average size of data breaches went down 16%, and "abnormal churn," or customers who defect following a data breach, decreased 18% year over year; additionally, detection costs also decreased about 6% from 2010 to 2011. Ponemon found that negligent insiders were the top cause of data breaches, while breaches caused by malicious attacks are 25% more expensive to organizations than any other type. The institute gathered its data by examining the actual data breach experiences of 49 U.S.-based companies in 14 different industries.

■ HTML5 Interest Up Among Mobile Developers

A recent survey conducted by IDC shows that mobile developers are increasingly interested in integrating HTML5 into their applications, with 79% of the developers surveyed indicating that they would be using the technology. Despite the increased interest, IDC predicts that fragmentation will continue to be a problem for developers, as HTML5 has no set standard, meaning that different browsers consume content in different ways and the applications have to take those differences into account. Platform-wise, Apple's devices are tops in developer interest, with 89% saying they want to develop applications for the iPhone and 88% showing interest in developing for the iPad. Conversely, developer interest fell slightly for Android-based devices, with 79% wanting to develop for Android smartphones this year compared to 87% a year ago; IDC attributes the decline largely to fragmentation, as Android devices are less standardized than Apple devices.

■ Groups Working To Establish Cell-To-Wi-Fi Roaming

The GSM Association and the Wireless Broadband Alliance are working together to



establish a framework for service providers to set up roaming systems that will automatically hand off devices between mobile networks and Wi-Fi hotspots. The aim of the groups is to use Wi-Fi to seamlessly and automatically increase network speeds and provide extra capacity for mobile devices such as smartphones and tablets without requiring the user to hunt for a Wi-Fi network on his own. The cell-to-Wi-Fi roaming capability would be especially helpful to international travelers grappling with different mobile networks; however, the groups don't expect carriers to offer free international roaming through Wi-Fi partners, as it could be a big moneymaker for the carriers.

■ X-Force Report Reveals Several Positive Trends In Security

IBM's X-Force Internet security team recently released its X-Force Trend and Risk Report for 2011, which showed a 50% decline in spam email from 2010 to 2011 and an increase in responsible patching habits among enterprises, with only 36% of software vulnerabilities going unpatched in 2011 compared to 43% in 2010. Other positive trends include a 30% decline in the availability of exploit code and a 50% decline in cross-site scripting vulnerabilities. The report also highlighted new challenges, including growth in social phishing and other social media-based attacks, a jump in automated password guessing, and an increase in attacks targeting shell command injection vulnerabilities.

■ Study Highlights Vulnerabilities In Open-Source Code Libraries

According to data from Aspect Security and Sonatype, more than a third of the 1,261 existing versions of 31 popular open-source code libraries contained known vulnerabilities, and 26% of the library downloads in the past 12 months were tainted. The vulnerabilities are a problem because applications are increasingly being constructed out of code contained in the libraries, with no clear way to highlight problems within the libraries or to identify remedies for vulnerabilities when a fix is made available. The companies' findings show that security code libraries are, ironically, more likely to have known vulnerabilities than frameworks, and the types of vulnerabilities found in the open-source code libraries can vary widely.



PHOTO LISTINGS

The *Processor* Photo Listings section includes brief overviews of data center products.

All products listed have been released recently, so use this section to get up to date with what’s new on the market and to find products you need.

Manufacturers:


Do you have a new product that data center/IT managers would be interested in learning about?

Send your press release or product information to press@processor.com.

FIKE’s ECARO-25®
CLEAN AGENT FIRE SUPPRESSION

Fike’s ECARO-25 clean agent with Impulse Technology is the best way to suppress fires and protect your high-value assets and business continuity. ECARO-25 features the unique fire extinguishing agent FE-25™ by DuPont™, which absorbs heat energy at its molecular level faster than the heat can be generated, so the fire cannot sustain itself. Features of ECARO-25 include:

- Zero Ozone Depleting Potential (ODP)
- Environmentally Safe
- Electrically Non-Conductive
- Colorless and Odorless
- Leaves No Residue
- For use in Occupied and Unoccupied Spaces
- No Overpressurization Concerns



(866) 758-6004 | www.fike.com/products/fsecaro.asp

NO LIMITS SOFTWARE
RACK MANAGEMENT PLATFORM

No Limits Software is a leading provider of data center management solutions, including asset and change management, capacity planning and real-time monitoring. RaMP, their flagship product, is a unique solution which automates asset and change management as well as enhancing the accuracy of capacity planning through the real-time monitoring of power, cooling and environmental data. The RaMP solution allows you to understand and more effectively operate your data center by managing both IT and Facilities assets and their relationships. RaMP dramatically reduces the time to find and repair equipment, improves system availability and increases data center energy efficiency by providing accurate data for capacity planning.




(314) 469-2766 | www.nolimitssoftware.com

METHODE ELECTRONICS, INC.
ME SERVER ENCLOSURES

Methode’s CTI branded enclosures are designed to accommodate servers and the challenging conditions associated with them, from high density population to extensive cable management, power and cooling requirements. With 100% usable RU space, the ME Server Enclosure can act as a server or network enclosure in both high and low density applications.


- Construction
 - 14 gauge frame, formed for strength
- Cable Management
 - Increased rear vertical capacity (over 9”)
- Power Handling
 - Up to 2 vertical troughs & 1 PDU or 1 vertical trough & 2 PDUs per rear corner
- Contour Mesh Doors
 - Standard front and rear
 - Increased area of mesh & total airflow



(888) 446-9175 | www.methode.com/data

CHENBRO PC782

The PC782 from Chenbro is an ideal solution for IPC applications. The PC782 can be applied in rugged environments such as kiosk, PoS, and digital signage. The PC782’s front bezel with customized Mylar and customized rear I/O, including VGA, Ethernet, HDMI, and serial ports, provide you more flexibility for different IPC markets. An 8mm M/B stand can fit standard or specific industrial M/B, and the rigid metal bezel protects the system. It comes with up to two internal 2.5-inch bays or one internal 2.5-inch bay + slim ODD bay and optional smart card adapter.



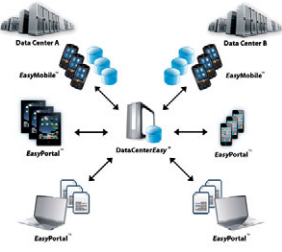
Target applications: Internet appliance, Web appliance, security appliance, communication server, and digital signage.

(909) 947-3200 | www.chenbro.com

INFORMATION SYSTEMS ASSOCIATES INC.
MOBILE DATA CENTER ASSET MANAGEMENT

ISA, the data integrity experts, announce DataCenterEasy®, the only purpose built mobile data center asset management system utilizing wireless handheld technology. The DataCenterEasy® system provides:

- A consolidated data base of the organization’s data centers’ assets
- A web portal interface for access to analysis and reporting
- Device inventory/audit via EasyMobile® wireless handhelds
- Scanning of device barcodes and RFID tags (coming soon)



ISA also offers state of the art data center asset inventory data collection services. We have performed services for many Global 1000 customers and others worldwide since 1994.

(702) 577-3404 | www.datacentereasy.com

OCC PROCYON CABLING SOLUTIONS

Procyon is a family of structured cabling products featuring industry-leading performance, density, accessibility and cable management features designed for use in various applications, including data centers. OCC’s Procyon family of products includes copper and fiber panels with integrated cable management systems, high-density fiber cassettes, cabinets, and more.


- High density in smaller spaces
- Easy installations
- Ability to make adds and changes with little downtime
- Integrated cable management features
- Unfettered access to individual ports
- Improved reliability (from better circulation of air)



(800) 622-7711 | www.occfiber.com

SQUARECARE
MISSION CRITICAL FLOOR CLEANING

Your “Mission Critical” area needs proper attention to support the backbone of today’s business. Our staff is well trained by industry leaders; your requested process followed to the letter; and our green cleaning techniques assure low voc invasion, vital dust retrieval and reduced concrete salts sloughing into these critical areas. Technicians have completed an extensive training program offering green cleaning services for Data/Access flooring both above and below the surface. We selected this service as a compliment to our current offering because it requires the same attention to detail; the thoughtful planning of the job; and deliberate execution to protect your investment. Rest assured we are carefully working while you are resting for the next day.



*Quality Since 1990

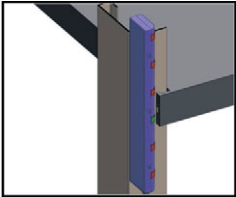
(800) 200-9680 | www.squarecare.com

METHODE - DATA SOLUTIONS GROUP
U-TRACKSM

Don’t be tied down when it comes to tracking your racked assets

U-TrackSM is designed to provide asset-tracking data, precise to the actual rack unit position, to the Methode DCIM manager. Via a robust API, U-Track can feed live data into leading DCIM software suites on the market today. For the first time the expensive, time consuming, and operationally risky act of taking data center inventory is reduced to the push of a button.

- No tethering required
- Rapid Installation & Set-up
- Installed without interfering with or removing in-rack equipment




To see the U-Track, Visit Booth 601 at AFCOM

(888) 446-9175 | www.methode.com/data

MONNIT
WIRELESS SENSORS AND ONLINE MONITORING SOFTWARE

Monnit’s wireless sensors are designed to detect and monitor every function critical to data center and facility monitoring, including: temperature, humidity, water, room access, presence of light, movement, and much more. Monnit’s wireless sensors transmit data through USB, Ethernet, or Cellular Gateways to the “Free” iMonnit online monitoring and notification system. The iMonnit online software allows for sensor customization and will send notifications via email or text message if a defined condition is met.

- Free Online Monitoring
- No Wires to Deal With
- 250-300 ft. Wireless Range
- Real Time Alerts via Text or Email
- Multiple Sensor Types Available



(877) 561-4555 | www.monnit.com

FLUENSEE ASSETTRACK™
ASSET TRACKING RFID SOLUTION

Fluensee AssetTrack™ is a proven, cost-effective RFID-enabled software solution that allows companies to significantly improve the visibility, security and utilization of their physical assets. Knowing where your assets are and when they move, helps you gain more control and streamline your operations.

- Configurable management dashboard allows users to view the most relevant asset data
- Hardware-agnostic capability captures data from RFID, GPS, barcode or sensor technology based on your needs
- Mobile inventory application allows use of handheld devices for inventory tracking and management
- Flexible integration allows information to instantly be shared with existing management applications



(303) 799-0700 | www.fluensee.com

ROCKYNET
COLOCATION FACILITY & CLOUD SOLUTION

In business since 1996, RockyNet experts have the knowledge and experience necessary to guide you to your goals. Our SAS-70/HIPAA Compliant Data Center offers collocation, managed servers, web hosting and virtual cloud machines so we can provide all of your data services. We provide redundant sites, UPS/Generator power, N+1 Cooling, multiple GigE Ports and static-free raised flooring.

- 24/7/365 On-Site Support
- Third Racks from \$250/mo
- Half Racks from \$350/mo
- Full Racks from \$600/mo



(303) 541-1555 | www.Rockynet.com

UPTIME RACKS ECC13
AIR CONDITIONED COMPUTER CABINET

Uptime Racks' air conditioned cabinet delivers the highest cooling capacity in the industry, while using no additional floor space. The 13,000 Btu/hr cabinet provides secure and reliable cooling to mission critical IT equipment. Uptime Racks are the ideal cooling solution for small IT closets or large data centers, providing efficient primary, supplemental, or back-up cooling.

- High Cooling Capacity: 13,000 Btu/hr @ 115V
- Cabinet cooling powered by MovinCool
- 32U of available rack space
- Environmental monitoring
- Cold Aisle/Hot Asile configuration
- Plug-and-Play installation



(303) 908-8043 | www.uptimeracks.com

PLENAFORM
PLENAFILL

PLENAFILL® 27U SCALABLE BLANKING PANELS takes the guesswork out of "How many blanking panels do I need?"

PLENAFILL® 27U SCALABLE BLANKING PANELS are separable from 1 to 27 RU's and are highly effective at isolating bypass airflow in server racks. They improve thermal isolation in containment systems and in hot/cold aisle configurations lowering equipment operating temperatures.

- Fits 19" EIA310D racks - also available in 23" widths
- Fits snugly against rails - No air gaps between U's
- No cage nuts or assembly required
- Also available in white which improves light levels and makes it easy to find open rack spaces.



(636) 537-0007 | www.plenaform.com

MODIUS® OPENDATA
DATA CENTER INFRASTRUCTURE MANAGEMENT

OpenData software by Modius helps resolve data center problems that impact business continuity and energy efficiency. OpenData provides real-time fault and performance monitoring of the extended power and cooling chains, as well as the decision support that makes it possible to optimize system performance against IT demands. By continuously monitoring and analyzing comprehensive, granular, time-series data, OpenData makes troubleshooting easier and forecasting capacity requirements more reliable, reducing operational costs and risks. Plus, OpenData is massively scalable across devices and locations, providing multi-site views through a single pane of glass.



(888) 323-0066 | www.modius.com

PDU CABLES™
UL LISTED POWER DISTRIBUTION CABLES

Experience why thousands of data centers have made PDU Cables their preferred choice.

PDU Cables - the industry's leading UL Listed and labeled power whips. Engineered to the highest quality level, controlled environment manufactured with industrial grade components and factory tested for unequalled safety and reliability. Offering hundreds of custom cable configurations to suit every application, our trained technical staff can assist you in every way.



PDU Cables provide a complete pre-fabricated PDU cable assembly solution to ensure the highest reliability for your data center environment.

(866) 631-4238 | www.pducables.com

STARPOINT DIGITAL
COLOCATION / DATA CENTER

Located 30 miles outside of Chicago, the Starpoint Digital data center offers collocation services geared toward medium to large-sized businesses. Service is fast, secure, and reliable, with both managed and unmanaged collocation offerings. Additional features include both high-level and low-level tech support, IP addresses, DNS hosting, device monitoring, multi-path redundant gigabit connectivity, and more.

Whether you are looking for inexpensive shared rack space, dedicated lockable racks, or disaster recovery off site back up storage, we are your answer.



(847) 524-3900 | www.mystarpoint.com

LINDY
USB PORT BLOCKER

System administrators can physically prevent users from connecting Pen Drives, MP3 Players and other USB Mass Storage Devices to their computers to copy data, introduce viruses, etc. The USB Port Blocker is a combined 'key' and 'lock' assembly which plugs into the USB port. Simply plug the 'keylock' into the port and release the latch - the lock remains in place! Plug the key back into the lock to remove. Easy!

- Physically blocks access to a USB port
- Consists of 4 locks and 1 key
- 5 different color code versions available: Pink, Green, Blue, Orange, White



(888)-865-4639 | www.lindy-usa.com/

GEIST DCIM DIVISION
ENVIRONET

Designed to simplify monitoring by integrating multiple communication protocols into one comprehensive system, Environet is the ultimate solution for your data center management needs. Environet combines graphical elements with an intuitive interface for an unmatched user experience. With SNMP, Modbus, BACnet, and LONWorks capability, Environet can support multiple types of equipment from many manufacturers. Environet goes beyond typical monitoring systems by surpassing reactive or even proactive methods to provide the user with predictive tool sets, letting you know about potential problems before they become catastrophic.



(970) 449-4130 | www.geistglobal.com

NETWORK BOX USA
Z-SCAN

Winner of the 2012 Global Excellence Awards in the Security Products and Solutions for Finance and Banking Category, Network Box's Award-Winning Anti-Malware System, the Z-Scan is completely revolutionizing how organizations deal with Internet-based security threats.

- Revolutionary approach in the war against Malware
- Remordenizing the concept of Virus Traps
- 4200x Faster than Traditional AV
- Instant PUSH to 12 SOCs globally
- Blocking Malware in SECONDS
- Real Time Fingerprinting
- Instant Protection



Internet security made easy since 2003

(888) 315-8886 | www.networkboxusa.com

SL-500X™ SERVERLIFT

The slim 24 inch frame sits on four oversized swiveling castor wheels, allowing it to easily maneuver around data center aisles. The unit is designed to load equipment from the side rather than the front, for a more intuitive operation and seamless installation. Aligning equipment is simple with an ultra-rigid platform featuring a unique Easy-Glide Shelf for added support into the rack. Safety is essential and the TouchSTOP™ Sensor stops the unit on contact with the ceiling, cable trays, or other overhead obstructions. Inspired by data center needs, the SL-500X™ ServerLIFT is the embodiment of power and elegance.

- Protect your people
- Reduce costs
- Improve productivity by 100%
- Streamline server deployment



(602) 254-1557 ext. 3000 | www.serverlift.com/itt

eRACKS/QUIET SERVER

The eRacks/QUIET Server is designed and constructed to be low-noise, using a special combination of low-noise fans, fan-placement and other low-noise components including a low-heat CPU and ultra-quiet CPU fan. The standard configuration includes an Intel Atom CPU, SATA3 hard drive, optical drive, and DDR3 memory, all enclosed in a short-depth 1U chassis. Single, dual, and quad NIC devices are available, and it can be configured with a range of CPU, HDD, memory, and connectivity options and your choice of operating system. Custom configurations are also available. It comes with a standard one-year full/three-year limited warranty. Base Price: \$795



(714) 532-5322 | www.eracks.com

JETNAS
NAS, iSCSI, FC STORAGE APPLIANCES

JETNAS provides a full range of NAS, iSCSI, FC storage solutions in different form factors from 1U to 4U rack-mounts and Towers to meet your business needs and to secure your critical data. Our JETNAS appliances combine high density storage capacity and advanced redundancy, scalability, availability, and management functionality.

- Hardware RAID with SAS2, SATA3 Enterprise drives
- Scalable up to 720TB with additional JBOD units
- 4 X 10 Gigabit Ethernet, Network bonding supported
- VMware, Xen, Microsoft Hyper-V compatible
- No additional cost for clients and capacity expansion

JETNAS

AFFORDABLE DATA STORAGE SOLUTION

(888) 227-2926 | www.JETNAS.com

ROSE ELECTRONICS
QUADRAVISTA™ HDMI

The QuadraVista HDMI is a flexible and powerful multi-viewer product with the capacity to control and monitor up to four HDMI video sources on a single display. Each of the quadrants can be adjusted and positioned to any size or location on the display. The QuadraVista HDMI can be accessed locally, sending ASCII commands using HyperTerminal, or from a third party controller over IP. The QuadraVista HDMI provides simultaneous support for HDMI and DVI video. The video features that the QuadraVista HDMI incorporates are:


- Automatic sensing of the input signal
- Picture-in-Picture
- Video loss detection
- Signal is automatically detected.



(281) 933-7673 | www.rose.com

ALPINE G123I.1 1U GPU SERVER
FROM ASPEN SYSTEMS


The Alpine G123I.1 1U is a 1U GPU Sever that supports up to 3 NVIDIA Tesla M2050/2075/2090 GPU's for processing power that will accomplish the most demanding tasks. The Alpine G123I.1 1U uses the latest, dual-socket E5-2600 Series Intel Xeon Processors and can be populated with up to 256GB of DDR3 ECC Registered memory using eight, DDR3 Dimm Sockets. Four, Hot-Swap, 2.5" SAS/SATA Hard Drives are included for data storage. The Alpine G123I.1 GPU Server includes dual-port, GB Ethernet Connections; supports IPMI KVM over LAN and is powered by 1800 Watt Redundant Power Supplies.



(888) 227-1286 | www.aspensystemsdirect.com

STULZ
CYBERROW® INTELLIGENT RACK COOLING SOLUTION

Introducing STULZ CyberRow® Intelligent Rack Cooling Solution, an advanced precision air conditioning unit. With cooling configurations for hot-aisle and cold-aisle capture, in both open and contained spaces, STULZ CyberRow will integrate seamlessly into new and existing data centers, providing years of low cost reliability. STULZ CyberRow is a standalone A/C unit and is installed and operated independently from the rack. This complete separation of the rack and the A/C unit increases reliability and provides greater freedom for designing the layout in the data center. STULZ also offers a full line of energy efficient precision air conditioners and ultrasonic humidifiers for precision cooling. For more information about STULZ and their products, email info@stulz-ats.com or visit www.stulz-ats.com.



(301) 620-2033 | www.stulz-ats.com

OCOSA COMMUNICATIONS
CLOUD SOLUTIONS & COLLOCATION

OCOSA Communications is a family owned and operated facilities-based provider headquartered in Tulsa, Oklahoma. From hosting to connectivity and data center to IT consulting, we can tailor a solution to fit your needs. We understand the small business and specifically the cycle of business. For almost a decade we have been tailoring solutions for businesses in almost every market vertical.

Our Core Competencies:

- Hosting:
 - WWW Hosting
 - Cloud Hosting
 - Collocation
- Connectivity:
 - Metro Ethernet / MPLS Connectivity / Internet Access
- Professional Services:
 - IT Consulting / Online Backup / Disaster Recovery



(866) 93-OCOSA | www.ocosa.com

Attention Data Center Professionals

Where do you go to find the newest products available?

Check out each issue for . . .

- > Information on companies you need to know.
- > Quick rundowns of new data center-related products.
- > Articles with valuable product overviews and data.

. . . then go to Procesor.com and take advantage of our online search tools to find even more in-depth information!

PROCESSOR

PROCESSOR

Subscribe Today!

Call (800) 334-7458

Subscribe Online!

Go to www.processor.com

Data Center | Power | Cooling | Storage
Wireless | IT | Networking | Racks
Servers | Security | Flooring

Processor is the industry's most comprehensive source for:

- Snapshots of new data center and IT hardware and software
- Rundowns of major industry news
- Information on manufacturers and resellers
- Tips, strategies, and advice from experts in the field



CHENBRO

Front I/O vs Rear I/O
Flexible Chassis Depth
Custom Front Panel for Differentiation

Design
Custom Solutions
Configuration

Mini-ITX, Micro ATX Form Factor Solution
Flexible 2.5" or 3.5" HDD Quantity
Various Fan and PSU Options

1U Appliance

Security Solution
Networking Solution
Data Protection



Security Solution

- Spam & Virus Firewall
- Web Filtering
- Web Application Firewall



Data Protection

- Backup Server
- Message Archive Server



Networking Solution

- Load Balancer
- Link Balancer

Chenbro Micom (USA) Inc.
Add: 2888 E. Spruce St. Ontario, CA91761 USA
Tel : 1-909-947-3200 Fax : 1-909-947-4300
E-mail : info@chenbro.com
[http : //www.chenbro.com](http://www.chenbro.com)

Monitor Data Center Batteries

Ensure Backup Power Is Ready When You Need It

WITH SO MANY CRITICAL components to worry about in a data center, it can be easy to put smaller systems on the back burner. One example is the data center’s batteries. Even companies that have implemented battery monitoring systems sometimes do not take the proper precautions to ensure their batteries are working as they should. Mike Daffron, director of sales and marketing at API (www.apibattery.com), says it’s not unusual to find companies with monitoring systems that aren’t in working order, properly wired, or even turned on. “We’ve found battery systems that would not carry the load if they were called upon,” Daffron says. “If they had a working battery monitoring system or regimented battery maintenance in place, this would not happen.” Such negligence can leave batteries unable to supply backup power to mission-critical applications, resulting in downtime. To avoid such a costly occurrence, consider the following.

✓ *Understand What’s At Stake*

According to James Hall, marketing manager at Staco Energy Products (www.stacoenergy.com), proactive battery monitoring provides the necessary data to ensure that batteries will be ready when needed to support critical operations. Among the top causes of UPS load losses, he says, batteries rank No. 1—responsible for more than one-third of power interruptions—both as primary emergency power backup and as the source of cross-over power for starting backup generators. “This begs the question, why do so many IT managers focus on primary architectures and solutions and treat backup power sources as second citizens?” Hall says.

Mike Phillips, national sales manager at BTECH (www.btechinc.com), cites the saying, “You can’t manage it if you don’t trend and track it” to illustrate the importance of battery monitoring, which eliminates the guesswork if batteries will be operational when needed. “Many facilities still rely on out-of-date battery data collected manually,” he says. “Many times, this data isn’t even reviewed until there is a problem.” Anu Cherian, Frost & Sullivan senior industry analyst, says aggressive investments in monitoring each battery’s strength can ensure downtime doesn’t prevent the UPS from functioning optimally. Parameters to check, Cherian says, include internal resistance and DC test current to ensure that measurements are accurate and can be repeated. “Preventive maintenance is the key answer to these problems, and these are offered by many UPS OEMs in achieving high battery uptime and, therefore, optimal UPS performance,” Cherian says.

✓ *What To Watch For*

To mitigate risks, Hall says, monitor and control such conditions as bad cells, which he says must be replaced before they affect other cells, and temperatures. “The IEEE recommends maintaining batteries at 77 degrees Fahrenheit,” Hall says. “Changes in temperature, especially extreme heat, can affect batteries’ life span. For every 15-degree increase in temperature, battery life is cut in half.” You should also account for voltage and resistance level balance in all redundant strings, he says.

Phillips notes that battery monitors possess various feature sets. “A simple monitor will count the depth, duration, and frequency of the discharges on the battery system. More evolved monitors will not only measure the discharge data but

also measure the jar voltages and temperatures,” he says. A full-featured monitor will add impedance measurements and cell-level monitoring when possible, he says. Daffron further advises managers to visually inspect battery systems at least

once a month, looking for corrosion and other abnormalities.

✓ *Test, Test, Test*


A properly designed battery monitoring system, Phillips says, combines a monitoring appliance and software. The appliance should collect data at the system, string, and unit levels (cell or jar) and monitor float and discharge current, unit voltage, impedance, and temperature. Overall, he says, “the appliance should be able to collect IEEE-compliant discharge data. The software should enable the user to analyze data in both graphic and report formats. Data collection should be automatic, and the data should be accessible on a LAN/WAN environment. Integration is key, and some open protocols should be supported (Modbus, SNMP, etc.).”

Critical battery status data, Hall says, enables managers to ensure that capacity conditions and permanent availability of high-quality energy is continually met. “Real-time status should be compared to battery configuration settings and network parameter settings, with deviations recorded in an events log and used to trigger email or dry-contact alarms,” he says. “With a proactive battery monitoring system, you can schedule battery replacement at convenient times and ensure that the system is fully charged and operational for peak or high-demand occasions.” Cherian notes that different testing parameters have different ideal intervals for execution. For example, impedance testing is non-invasive, quick, and should be done ideally every quarter, and discharge testing should be performed during installation and again in two to three years, while temperatures should be monitored daily, Cherian says.

✓ *Consider Going Wireless*

With today’s IT budgets being challenged with a “show-me-why mentality,” Hall says, companies may be less willing to support battery monitoring, as traditional wired battery monitoring solutions carry high initial and installation costs and an inherent lack of flexibility. Conversely, he says, wireless solutions can offer an effective way to increase availability while ensuring low TCO. Further, proactive battery monitoring no longer fits the wired traditional model, he says. With wireless monitoring, he explains, “initial costs are less than half of traditional wired systems. Installation and programming time and costs are dramatically lower, and configuration and flexible future use ensures the lowest TCO.” Above all, he says, IT can use wireless systems with any battery type and systems are ideal for all needs.

Beyond providing real-time feedback, Cherian says, wireless monitoring provides an “ideal and aggressive approach to problem-solving with anticipatory measures to keep battery life at its maximum.”

However, BTECH’s Phillips says, with wireless systems you need to consider potential security issues. For example, he says, high-security government and commercial facilities will not consider wireless technologies because of the risk involved in using 802.1 and ZigBee-type technologies. 

Most Practical Tip:

✓ *Don’t Eliminate Service Contracts*

Mike Daffron, director of sales and marketing at API (www.apibattery.com), says that although some managers reason that by installing a battery monitoring system, they can eliminate service contracts with their preventive battery maintenance providers for hands-on inspections, companies should avoid discontinuing such a “check-and-balance” system. “What’s important to note is the monitoring system can lower your battery maintenance costs, but we certainly don’t want to say it eliminates them,” Daffron says.

Smartest Tip:

✓ *Don’t Neglect Preventive Maintenance*

Despite the importance of battery systems, “battery monitoring is sometimes put on the bottom of the list,” says Mike Daffron, director of sales and marketing at API (www.apibattery.com). Although some managers have a holistic understanding of why preventive maintenance is necessary, he says, others enlist an “out of sight, out of mind” mentality where their battery monitoring systems are concerned and neglect maintenance. “The battery monitoring systems really help owners see their batteries’ general health status in real time,” he says.

BONUS TIPS:

✓ *Enlist proper disposal.*

James Hall, marketing manager at Staco Energy Products (www.stacoenergy.com), says it can’t be overstated that “batteries are considered hazardous waste.” Federal law, he says, requires all used lead-acid batteries to be managed as universal waste. “For this reason alone, facilities with lead-acid, valve-regulated, or wet cell/flooded batteries should consider hiring approved firms to handle all battery installations, maintenance, and disposal,” he says. “The potential for spills, improper disposal, and resulting liability are just too great.”

✓ *Don’t skip reinstallation.*

Installing replacement monitoring systems can be daunting, Hall says, as wired monitoring systems require removing and reinstalling hundreds of similar-looking wires leading to termination points that are not always visible. Further, replacement batteries aren’t typically the same as those they’re replacing, complicating reinstallation and resulting in wiring errors that are difficult to troubleshoot and correct, he says. Still, he says, don’t pass on reinstallation systems because “batteries have useful lives of three to five years, max, making battery monitoring a critical part of predicting battery health and premature failure before it results in system downtime.”



FEATURED PRODUCT

Does Your NAC Solution Answer These Questions?

It Should

WITH SO MANY NAC APPLIANCES and solutions on the market, companies just like yours need to ensure the NAC solution not only fits within the network but is also the most secure. Any NAC Solution should be able to answer the following questions, but unfortunately, many can only answer a few of them, and with varying levels of success.

Who?

One of the biggest mistakes companies make is thinking that Active Directory gives them full control of the “who” aspect of their security solution. What is forgotten is Active Directory does not give control over the packets that can be transmitted from your end nodes (AD or non-AD joined machine). Even without an AD account, I can ping resources, attempt RDP/SSH/Telnet/etc., as well as listen to traffic in an attempt to compromise access. Companies need to take this question one step further and ask who at a MAC Address and Device type level.

What?

What is the device type getting on your network? One of the easiest ways to gain access to a network is to use the cable currently plugged into a networked printer.

Even with MAC Filtering on, a rogue computer can easily spoof the same MAC address of the printer and bypass MAC Filtering. Your security solution should once again take this question a step forward and look at the traffic type and ask, “Why is this printer or IP Phone attempting to send traffic to the HR server?”

Where?

Where is your traffic coming from, and where is it going? Many security solutions will only check one of these two. To make an informed decision whether the traffic is appropriate, a security solution should be checking both. An HR AD account coming in on an engineering VLAN (plugged in at engineering desks) should not be making requests to the Accounting server.

When?

Many of us work long hours and occasionally late into the night. Odds are though, a majority of the year, access to the financial system is not needed after hours. Can your security solution block access after hours to the accounting server for 11 months and 3 weeks, but allow access during the week of April 15th?


How?

Network traffic all looks similar to the human eye. An HTTP request sent over port 80 looks nearly identical to an HTTP request sent over port 27387. Does your security solution take the “What” into account and ask why is this printer sending HTTP requests? Or SQL requests? How a device is expected to communicate and look for anomalies outside of that norm is important.

How Often?

Now that you’ve considered all the security questions listed above, there is one last question you must answer for yourself. Is my security solution ready to take action 24 hours a day, or is there a delay between checks? Can I authenticate with one device, swap the network cable to another device, and gain access from an unauthorized

device before the security solution returns to check that I still pass the policies?

If you do not feel confident that your current solution can successfully answer each of these questions for every packet crossing your network, visit www.miltonsecurity.com and see how the Edge Series can give your answers to each of these questions. The Edge Series is the Adaptive NAC Solution from Milton Security Group and is the only one that can do all of this, with solutions starting from less than \$3 per day. 

YOU COULD WIN THIS AT INTEROP

What Would You Include?

THE HACKET

Milton Security Group is assembling the ultimate portable pen test kit based on the most highly requested items. What would you include? Send your comments, and keep up with The Hacket's progress at www.miltonstart.com/blog

The Hacket is comprised of a SCOTTEVEST® Transformer Jacket, and contents thus far include a Gateway LT3119n with BackTrack 5 R2, two Alfa Antennas, Wi-Spy 2.4x, Apple iPod Touch, and lock pick kit. More items will be added to make the portable pen test kit complete. One lucky winner will receive The Hacket during Interop, in Las Vegas, May 8-10.

Milton SECURITY GROUP



#1 SOURCE for TECHNICAL COMPUTER FURNITURE



2012
2011
2010
2009
2008
2007
2006
2005
2004
2003
2002
2001
2000
1999
1998
1997
1996
1995
1994
1993
1992
1991



■ Command Centers
■ Control Stations



■ Relay Racks
■ PACS - Mobile Carts



■ Flat Panel Monitor Arms
■ Motorized Work Stations





888.222.7270 hergo.com

GSA Contract # GS - 29F-0133G
56-01 55th Avenue, Maspeth, New York 11378

Terms, specifications & appearance are subject to change without prior notice • © 2012 hergo®

Data Center Cleaning Services

Enlist Experts To Help Keep Your Data Center In Tip-Top Shape

IT CAN BE EASY SOMETIMES to focus on servers, storage solutions, rack mounts, network cabling, and every other component of a data center, but completely forget about how important it is to keep it clean. “The data center is the brain and central nervous system of the organization,” says Tom Conners, market manager for data centers at Square Care (www.squarecare.com). “Unclean areas negatively affect the performance and longevity of the equipment. Large data center operations can lose up to \$1 million per minute due to systems outages brought on by processor performance degradation.”

For most companies it simply isn’t feasible to clean their own data centers, but as Conners suggests, that doesn’t mean it can be ignored. Investing in data center cleaning services is a great way to remove dust and other particles from your infrastructure. We’ll show you what to look for in a data center cleaning service provider and how they can help you maintain your components for years to come.

✓ *Research Potential Cleaning Firms*

It’s important that you don’t rush into choosing a data center cleaning service, because there are multiple factors to consider that may make one firm fit your needs better than another. Not every data center is created equal, and many of them have unique cleaning needs that not all cleaning services can address. You should not only research what cleaning firms offer, but also look at their reputation and guarantees.

“A seasoned cleaning firm will have a standard operating procedure from start to finish with checks and balances to ensure the center was cleaned properly and within industry standards,” says Bill Montgomery, founder of Premier Solutions Co. (www.premiersolutionsco.com). “The service is 90% labor, so the training levels of personnel, length of time employed, etc., needs to be presented and reviewed.”

Montgomery also suggests looking at a cleaning firm’s track record and how long it has been in business. He even recommends going as deep as finding out what types of cleaning products the firm uses because they are “the tools of the trade and should be of high quality.” Finding out exactly what services a cleaning firm offers and what kind of quality you can expect should narrow down your list of choices and help you make an informed decision.

✓ *Compare The Costs*

After you’ve compared the reputation and provided services

of a cleaning firm, you should next look at the pricing options they offer and budget for how much it will cost to clean your specific data center. A lot of factors go into the overall price of a cleaning service, and you should make sure you get exactly what you’re paying for.

“Cleaning costs are typically a function of size of the area to be cleaned, the scope of the cleaning effort, and the level of contamination present,” says Rich Hill, president of Data Clean (www.dataclean.com). “Other factors impacting cost are equipment density within the environment, travel

for cleaning staff, work hour restrictions, access constraints, and general housekeeping. Cleaning can range from less than 25 cents per square foot to \$3 per square foot, depending on all of the foregoing.”

You should also look at what is being cleaned for the price you pay and the level of cleaning being performed. There may be specific situations, such as after construction or in the wake of a disaster, where you will need more in-depth cleaning services than on an annual floor cleaning. One type of cleaning may take more time than another, which could affect the overall pricing of the service, as well.

✓ *Know What Can Be Cleaned*

According to Conners, “everything can and should be cleaned.” That covers everything from all access floors and floor panels, walls, ceilings, and light fixtures to server racks, UPS units, panels, and more. It may seem overwhelming that all of these data center components will need to be cleaned at some point, but that’s where data center cleaning services come in to play. And the best cleaning firms have practices in place that will leave no stone unturned.

Conners says that data center cleaning is usually performed in stages. Firms normally start by cleaning above-floor light fixtures, racking, and equipment before moving on to under-floor and surface floor cleaning. The process is completed carefully to avoid touching wires, cables, and electrical parts of equipment. According to Conners, “at all times, the emphasis is on safety, through the use of cones, signage, safety glasses, and a solid, consistent process.” These extra precautions will make sure that your infrastructure isn’t damaged and that everyone at the data center is safe during the cleaning process.

✓ *Spot The Subtle Benefits*

Always keep in mind that data center cleaning does much more than keep your physical infrastructure free of dust and debris. It also reflects positively or negatively on your company from both your employees’ and customers’ points of view. “People who work in a clean facility are more productive and healthier because they aren’t breathing in a lot of contaminants every day,” Hill says. “And a clean facility is a positive reflection on management. Visitors and customers will perceive the facility as well-run if it’s clean.”

Best Tip:

✓ *Establish Cleanliness Standards & Policies*

One of the easiest ways to avoid extra expenses related to cleaning is to put a few standards into place that will minimize the chance of dirtying or damaging your data center. For instance, Tom Conners, market manager for data centers at Square Care (www.squarecare.com), suggests that you don’t allow heavy pallets or carts onto data center flooring and that you shouldn’t allow food or drink. Conners also recommends using sticky mats and changing them daily as well as limiting non-essential materials being stored in the data center. Following these standards will help lower the amount of cleaning that will need to be done and therefore lower cleaning expenses.

Smartest Tip:

✓ *Keep Track Of Problem Areas*

If you notice that one specific part of your data center needs cleaning more often than others, there may be an underlying problem that needs to be addressed. “Track equipment failures, including rack location, position in rack, and cause of failure,” says Rich Hill, president of Data Clean (www.dataclean.com). “One failure may not be noteworthy, but several may be indicative of a trend that can be analyzed and solved.” By spotting irregularities and adjusting the layout of your data center, if possible, you can reduce cleaning costs and prevent damage to your important physical infrastructure.

BONUS TIPS:

✓ *Recognize different levels of cleaning.*

“One client may want their server racks cleaned inside and out, with each server wiped down, where accessible, while another may want only the exterior vacuumed, or not touched at all,” says Tom Conners, market manager for data centers at Square Care (www.squarecare.com). “Similarly, a client may want every floor tile removed and cleaned top and bottom vs. removing only those panels needed in order to access the entire subfloor.”

✓ *Set up a cleaning schedule.*

“Frequency depends on type of facility, area within the facility, frequency of system maintenance/modification, interior and exterior environment, and age of the facility,” Conners says. “Typical frequencies are to clean the under floor annually, the CRAC and UPS or other system areas annually, and the top of floor monthly or semi-annually.”



BayTech
|||||

www.baytech.net

33 Years Made in the USA

Automatic Transfer Switch—ATS



Standard Features

- Out-Of-Phase Source Switching
- 8-15ms Switching Time
- Programmable Dropout Voltage
- Programmable Switchback Voltage
- SNMP And HTTP With DS-Series
- PCB-Based Reliability
- Reports Volts, Current, Watts, VA
- Break-Before-Make Transfer

Provide Redundancy To Single-Corded Devices With The Ability To Switch Out-Of-Phase Sources In 8 To 15ms.

Providing redundancy on the power-circuit level is critical to maintaining uptime. The ATS Series provides a simple and reliable solution for automatically sensing power loss and seamlessly switching to a backup circuit. BayTech ATS transfer switch line offers a unique approach to performing the transfer by completely severing the connection between the source and load then waiting for the zerocrossing to perform the transfer. This is the driving force behind being able to perform out-of-phase transfers with a low-cost

solution. Monitoring Power on the ATS is a unique feature which provides information about:

- Amperage Load
- (Watts) True RMS Power
- Volt-amps
- Voltage
- Internal Temperature

By combining the ATS and the DS-Series, console server alerts on power and transfers can be sent via secure SNMP V3.

Bay Technical Assoc. Inc. 5239 A Avenue Long Beach, MS 39560 Tel: 228-563-7334 Fax: 228-563-7335 sales@baytech.net

WeBuyUsedTape.net

We pay top dollar for your new and used tapes.

- DoD, HIPAA, and SOX-approved processes
- On-Site Data Destruction and References available
- 35 years experience; 20 years same facility

We make it easy:

- Submit your list of media: online, email, or fax
- Receive a confidential offer within 24 hours
- Documentation and shipping arrangements prepared
- Tapes received and verified at our secure facility
- Data eradicated using safe and approved processes
- Receive payment and Data Destruction Certificate

Contact us now! Free Shipping and Fast Pay!

(800) 821-1782 www.WeBuyUsedTape.net

C R U X I A L™

DATACENTER / IT
NETWORK / TELECOM
INDUSTRIAL / ELECTRONIC
MILITARY / AEROSPACE

- ◆ Rackmount Enclosure Systems & Products
- ◆ Server Racks & Cabinets
- ◆ Cooling & Power
- ◆ Security & Cable Management

Free Screws/CageNuts

RACKMOUNT
SOLUTIONS

Call 866-207-6631
www.rackmountsolutions.net

Improve Your Data Center & Server Security

Build A Hardware & Software Security Approach

SERVER SECURITY, as well as overall data center security, should be one of the main focuses of enterprises and data centers because every business is responsible for storing data and then using that data to help customers and increase profits. “The availability of information is key to everything that we do in the IT industry,” says Jeff Clark, general manager of Lindy USA (www.lindy-usa.com). “Leaving your data center unsecure is much like riding a motorcycle without a helmet.”

There are many ways to secure your servers and your data center from a hardware and software point of view. We’ll show you why you should use a combination of multiple solutions to fully protect your data center from data loss, theft, and physical damage.

Know The Basics Of Server Security

Securing your operating system and applications are two of the three main components to server security, according to Pierluigi Stella, CTO at Network Box USA (www.networkboxusa.com). Although operating systems and applications often have vulner-

abilities once they are available, vendors will usually release patches that will help fill the inherent security holes. But these patches are no help to companies and data centers unless they download them on a regular basis and make sure the system is always up-to-date.

The third component to consider is the security of the data itself. And while Stella says this can be the cause of many headaches for administrators, it can’t be ignored. Firewalls, network access controls, data encryption, and other solutions must be used together to prevent outside access to your network and internal systems, and you should also put measures in place that will protect data in case there is an attack. It’s important to have a layered approach to server security so viruses and other threats can be caught on any given level before gaining access to sensitive data.

Prevent Unnecessary Physical Access

When it comes to physically securing your data center as well as the servers and other equipment within it, the best place to

start is with employee access. You should determine which employees need access to the servers and when they should be allowed to access them. By reducing the number of people with access to servers, you can limit the potential opportunities for equipment to be damaged or compromised.

“To put it simply, put a lock on the door and only give the key to who you want to let in,” Clark says. “You need to monitor the entrances and exits to see who comes in and who goes out. You need to look at how people interact with their servers, whether it is with keyboards, mice, [or] USB ports, to establish methods and define what they are allowed to do to prevent abuse.”

Consider Modular Server Vaults

For some companies or agencies, the data stored on or passing through servers is so sensitive that advanced physical security measures must be put in place to protect it. But that doesn’t mean that a less-sensitive data center can’t also benefit from the additional security. Modular server vaults

Key Points


- Understand how important it is to protect your data from every possible angle and know the basic server security measures that should be put in place to protect that data.
- Put physical security measures in place that both prevent access to areas of the data center as well as the physical infrastructure itself, including modular server vaults.
- Look at server security from a hardware and software standpoint. A solid combination of physical and virtual solutions will ensure your sensitive data is secure for years to come.

not only protect servers from unwanted access, but from physical damage due to environmental conditions or other factors, as well. In fact, server vaults are often used by federal agencies or on foreign military sites where extensive physical damage is a distinct possibility.

What makes modular server vaults particularly helpful to data centers in virtually any industry is how they are built to grow alongside and adapt to the changing needs of almost any company. “A modular server vault is the opposite of computer hardware because it is never obsolete,” says Hugh Smith, owner of FIRELOCK Modular Vaults (www.firelock.com). “It can be made bigger, smaller, or even change shape, and the modular server vault can be outfitted with any new technology over time.”

Understand Each Department’s Responsibility

Within a company, there are multiple departments, and each one has its own responsibility when it comes to server security. “Data centers are not involved with software security; they are responsible for physically securing the hardware, including servers,” says Von Williams, director of security and governance at Logicalis (www.us.logicalis.com). “The security for the application running on the server would be the responsibility of the data owner and application developers. System administrators, or data custodians, are responsible for applying the security controls on the server that have been defined by the data owners.”

If each department is working separately to manage its own security solutions, then the overall company will benefit from the measures in place. But if there is any fragmentation within or between business segments, there could be unforeseen security vulnerabilities that may not be caught in time to prevent a simple attack or a large-scale disaster. 

Action Plan

The following action plan was provided by Jeff Clark, general manager at Lindy USA (www.lindy-usa.com).

- Identify what is most important when it comes to data protection. This can be different from one organization to another based on a variety of circumstances. One company may want to protect customer credit card records, while another is concerned about the introduction of viruses into its network environment.
- Analyze the physical environment to determine which employees actually need physical access to areas within your data center or specific pieces of equipment. This will help you restrict physical access to infrastructure and help you decide whether you should invest in more security measures, such as locking and monitoring systems, blocking points, or installing fingerprint or eye scanners for particularly high-value sections of your data center.
- Look at what types of software and hardware solutions can apply to your particular environment to help reduce unwanted access through the network, including both software- and hardware-based firewall systems, recognition systems, and more. A combined virtual and physical approach will help secure both your sensitive data and the actual equipment where that data is stored.



Get Started

To know the level of protection your servers require, you must first understand how they are used. “Server security is extremely important based on the function the server plays within the company,” says Von Williams, director of security and governance at Logicalis (www.us.logicalis.com). “For instance, servers containing company financial or intellectual property should have the highest security controls in place to protect the data and prevent unauthorized employees from accessing that data.”

Top Tips

The following tips were provided by Hugh Smith, owner of FIRELOCK Modular Vaults (www.firelock.com).

- ✓ Start off with security when designing your data center. IT managers will spend their entire budget on speed and density, while security is ignored.
- ✓ Beware of consultants with ties to the hardware industry. If they start discussing software and firewalls as just more computer equipment, they don’t know the whole industry.
- ✓ Understand what you’re protecting and determine what the real cost of a security infiltration would be.
- ✓ Even if you can’t afford a full-scale server vault environment, you can at least move your backup tapes and archives to a safe place for little or no cost differential by researching the best providers in your market.

The Ultimate in Offsite Server Vault Protection

REAL Protection for Electronic Records





Media Vault

1 Class 125 Four-Hour Rated Vault Door

20 High Density Slotted Media Storage

4 Smoke and Heat Activated Hydraulic Door Closer

6 Environmental/Alarm Monitoring

9 3M™ Novec 1230™ Fire Suppression

10 Watershield Roof Deck

12 Wire Management Rails

22 Business Recovery Computers, Servers and Software Sets for Recovery Suite

24 Insta - Recovery Sets

24 TempPageR™

Zone IV Seismic Engineered

Magnetic Shielding - Faraday Cage

11 Uni-Mount Ceiling Grid for Modularity

11 Vault Certification

11 Servers

11 Server Vault

Precise Temperature and Humidity Control

Structural Welded Construction

INSULATED PANELS
FIRELOCK® Data Protection Systems™
Listing #16394-1
UL 72 Section 5 - Fire Endurance Test
UNVENTILATED Modular Vault with
Through Penetration and Door
Class 125 - 4 hrs.
Class 125 - 2 hrs.
Class 350 - 4 hrs.
and
ASTM E 119 - 5 hrs.
Modular Vault Panel

610-756-4440 • www.firelock.com • Email: hsmith@firelock.com

The Ultimate in Offsite Data Media Protection



ADVANCED RECORDS MANAGEMENT

Serving the Minneapolis/St. Paul Areas

Offsite Data Protection
Offsite Records Management
Certified Data/Document Destruction
Document Scanning/Imaging

NEW FEDERAL REGULATIONS
REQUIRE ABSOLUTE SECURITY FOR
ELECTRONIC RECORDS & MEDIA.

ADVANCED CERTIFIED LEVEL
OF PROTECTION COUPLED WITH
OUR SUPERIOR SERVICE ENSURES
YOUR DATA CENTER'S
BUSINESS CONTINUITY.

Peace of Mind is Everything

763-553-1422
www.arm-mn.com

DocuSafe
Data & Records Management

Your Media Storage and Document Management Experts
Serving the State of New Jersey,
NYC metro area & Philadelphia metro area

Contact us for:

- Ultra High Security
- Fireproof Media Storage
- Evaulting or Server Storage
- Secure Media Destruction
- Media Management Software
- Great Technology Backed up By Excellent Service
- Class 125 Rated Firelock™ Vault

We offer help in getting off the mountain.

DocuSafe™
DATA AND RECORDS MANAGEMENT

DocuSafe Data & Records Management
888-264-7367 • www.docusafe.com



WesTex Document, Inc.

"Our Business, Is Keeping Your Business - Your Business!"

Our Disaster Recovery Plan Goes Something Like This...



Uninformed Client

Micrographics Services
Storage Services
Destruction Services




CERTIFIED PRIVACY+




BLUE RIBBON

800-280-7532
Lubbock/Amarillo

PRODUCT SPOTLIGHT

Data Center Cooling

Product	<h2>Black Box Elite™ Cold Aisle Containment System</h2> 	<h2>Black Box ClimateCab™</h2> 	<h2>Black Box Cold Front™ Passive Liquid Cooling</h2> 
Description	<p>Use the Elite Cold Aisle Containment System from Black Box to increase cooling efficiency in the data center. With this kit, you can shut off the aisle ends to contain cool air. You'll also create a more efficient cold aisle by reducing air recirculation. The system is exceptionally effective at reducing energy costs, lowering power bills, and increasing cooling capacity.</p> <ul style="list-style-type: none">• Concentrates cool air where it's needed—at the front of equipment.• Reduce energy costs and increases cooling efficiency.• Convenient, professional-looking doors seal cold aisles.• Choose from 42U or 45U high units. <p>Best For: Data centers of any size interested in increasing their cooling capacity.</p> <p>Price: \$1,379 for a 42U unit</p> <p>Contact: (888) 433-5049 www.blackbox.com/go/ColdAisle</p>	<p>ClimateCab cabinets from Black Box save energy and money by cooling only the cabinet rather than a whole room or IT center. They feature air-conditioning units that keep equipment cool even with room temperatures up to 130° F. Whether you need to house multiple servers, a PC workstation, or a small amount of rackmount equipment, ClimateCab is the solution to keep everything cool.</p> <ul style="list-style-type: none">• Install equipment without the need for additional cooling or costly infrastructure.• NEMA 12-rated for protection against dirt, dust, lint, debris, and splashing liquids.• Locks to protect equipment from tampering.• Choose from server, data, and wallmount models. <p>Best For: Housing network equipment outside the protection of a climate-controlled data centers in areas such as factory floors, remote sites, and industrial environments.</p> <p>Price: Starts at \$2,695.95</p> <p>Contact: (888) 433-5049 www.blackbox.com/go/ClimateCab</p>	<p>Black Box's Cold Front data center cooling solution can cut power and cooling costs up to 50%. Cold Front consists of Heat-Transfer Doors and a Coolant Management System. It supports five times the computing power of air-cooled facilities and requires no rearrangement of enclosures. Cold Front returns cooled air into the data center and eliminates the need for hot-aisle/cold-aisle configurations.</p> <ul style="list-style-type: none">• Neutralizes cabinet heat at the source with Heat-Transfer Doors.• Installs right on existing cabinets.• Doors have no moving parts for reliable operation with virtually no maintenance.• Supports five times the computing power of air-cooled facilities.• Cuts power and cooling costs by 50%. <p>Best For: Companies of all sizes looking for high-efficiency cooling to save on energy costs. Ideal for new installations and retrofits.</p> <p>Contact: (888) 433-5049 www.blackbox.com/go/ColdFront</p>

Product	<h2>MovinCool Office Pro 18 sold by Rackmount Solutions</h2> 	<h2>MovinCool Office Pro 24</h2> 	<h2>MovinCool Office Pro 36 sold by Rackmount Solutions</h2> 
Description	<p>The MovinCool Office Pro 18 offers superior cooling capacity without requiring a nonstandard power source. This portable air conditioner protects sensitive data and electronic systems from loss and failure, acting as an insurance policy for your infrastructure. The Office Pro 18 features an intuitive control panel that lets users designate when the unit operates.</p> <ul style="list-style-type: none">• Provides 16,800 BTU/hr of cool air maximum spot cooling• Operates on a standard 115V power source• Programmable controls enable weekend and after-hours cooling• No costly installation necessary• UL Listed for safe operation <p>Best For: Heat-sensitive office and data systems.</p> <p>Price: \$3,655</p> <p>Contact: (866) 207-6631 www.rackmountsolutions.net</p>	<p>Computers, networks, communications, and office equipment will shut down when the temperature rises, crippling daily operations. By bringing spot air conditioning to just the area or room that needs it, the Office Pro 24 saves money while protecting your company's investment in equipment and customers. Self-contained and portable, the Office Pro 24 requires no costly installation—simply roll it in, plug it in, and turn it on.</p> <ul style="list-style-type: none">• 24,000 BTU/hr of maximum spot cooling to just the room that needs it• Programmable digital controller operates automatically weekends or after hours• Operates on 220V power• Provides cooling down to 65 F <p>Best For: Offices with heat-generating electronics.</p> <p>Price: \$4,885</p> <p>Contact: (800) 264-9573 www.movincool.com/dealer.php</p>	<p>The MovinCool Office Pro 36 delivers 36,000 BTU/hr of spot cooling for sensitive equipment. The portable, self-contained air conditioner requires no costly installation and features an intuitive control panel that lets users program the unit to operate after hours or on the weekend.</p> <ul style="list-style-type: none">• Provides 36,000 ETL-verified BTU/hr of cool air maximum spot cooling• Operates on a 208/230V power source• Features an AFCI plug for added safety against electrical arcing• Supports plug-and-play condensate pump• Easy-to-use programmable controls• Self-contained, portable, and easy to set up and operate <p>Best For: Servers, routers, telecommunications, and other heat-sensitive equipment.</p> <p>Price: \$6,980</p> <p>Contact: (866) 207-6631 www.rackmountsolutions.net</p>

PRODUCT SPOTLIGHT

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

MovinCool CM12 & CM25



The MovinCool CM12 and CM25 are ceiling-mounted air conditioners that are just 15.5 inches (CM12) and 20 inches (CM25) tall, making them compact enough to fit above a drop ceiling for spot cooling space-limited installations and server rooms. The units free up valuable floor space and feature built-in flanges and mounting brackets. The CM25 features a wall-mounted electronic controller that lets users monitor and troubleshoot problems.

- The CM12 provides 10,500 BTU/hr of cool air at 80 degrees Fahrenheit at 50% RH and operates on a standard 115V power source
- The CM25 provides 25,000 BTU/hr of cool air at 80 F at 50% RH and operates on a 208/230V power source
- Can fit into tight ceiling spaces, freeing up floor space

Best For: Space-limited equipment rooms and cramped server and telecom closets.

Price: \$2,895 (CM12), \$6,995 (CM25)

Contact: (800) 264-9573
www.movincool.com/dealer.php

MovinCool CMW30



The MovinCool CMW30 water-cooled model is ideal for applications where an air-cooled unit cannot be used because there is no available space for hot exhaust air. The CMW30 comes standard with a wall-mount controller that offers advanced communications, monitoring, self-diagnostic, and troubleshooting capabilities. It can fit into virtually any drop-ceiling space and doesn't require refrigerant connections or outside condensing units.

- 29,400 BTU/hr total cooling capacity
- High sensible cooling—ideal for server rooms
- Environmentally friendly design—7 IEER, R-410A refrigerant, and RoHS compliant
- Maximum sound level of only 55 dB(A)—5 decibels lower than a normal conversation

Best For: Server rooms and other applications with dense heat loads.

Price: \$7,495

Contact: (800) 264-9573
www.movincool.com/dealer.php

MovinCool Office Pro 12 sold by Rackmount Solutions



The MovinCool Office Pro 12 is a portable spot-cooling air conditioner designed to lower operating temperatures of computers and networking, communications, and office equipment to maximize reliability and hardware life span. The Office Pro 12 is self-contained, portable, and features an electronic thermostat and a programmable control panel for tailored cooling when and where you need it most.

- Provides 12,000 BTU/hr of cool air maximum spot cooling
- Programmable digital controller
- Operates on a standard 115V power source
- No costly installation necessary
- Maintains ideal operating temperature for heat-sensitive electronics, down to 65 degrees Fahrenheit

Best For: Offices filled with heat-generating electronics.

Price: \$3,295

Contact: (866) 207-6631 | www.rackmountsolutions.net

MovinCool Office Pro 60 & 63 sold by Rackmount Solutions



The MovinCool Office Pro 60 and 63 deliver up to 60,000 BTU/hr of cooling capacity. These portable air conditioners are designed to manage temperatures for computer networks, communications equipment, and office electronics. The self-contained Office Pro 60 and 63 are easy to install—just position the wheeled unit, plug it in, and turn it on.

- Programmable digital controller enables weekend and after-hours cooling
- Office Pro 60 operates on a 220V power source; Office Pro 63 uses 460V
- Provides cooling in the low 60s to maximize the life span of heat-sensitive electronics
- Condensation pump included for uninterrupted operation
- UL Listed for safe operation

Best For: Large office spaces and computer rooms filled with heat-sensitive electronics.

Price: \$9,995 (Office Pro 60); \$12,495 (Office Pro 63)

Contact: (866) 207-6631 | www.rackmountsolutions.net

MovinCool Office Pro W20



The latest addition to MovinCool's portable air conditioners, the Office Pro W20 has an impressive 15,700 BTU/hr cooling capacity. Because the unit is watercooled, customers need not worry about locating the Office Pro W20 in areas without local hot air exhaust: The unit simply requires a water supply and a standard 115V outlet.

- Programmable digital controller enables weekend and after-hours cooling
- UL listed for safe operation
- Accepts a wide water supply temperature range (40 to 90 F) and a minimum water pressure of only 12 pounds per square inch
- Connects to a fire alarm system to allow emergency shutdown

Best For: Office spaces and IT equipment rooms where hot air exhaust is not available.

Price: \$4,375

Contact: (800) 264-9573
www.movincool.com/dealer.php

Uptime Racks ECC13 Air-Conditioned Computer Cabinet



Uptime Racks ECC13 efficiently cools IT equipment by bringing the cooling directly to the heat source. The ECC13 directs cold air to the front of the cabinet, ensuring that valuable servers remain cool. Uptime Racks provides primary, supplemental, or backup cooling to any environment.

- High cooling capacity: 13,000 BTU/hr at 115V
- Cabinet cooling powered by MovinCool
- 32U of available rack space
- Environmental monitoring
- Cold aisle/hot aisle configuration
- Plug-and-play installation

Best For: Small server rooms or hot spots within larger data centers.

Price: \$8,200

Contact: (303) 908-8043 | www.uptimeracks.com



BUYING TIPS:

Data Center Cooling

FOR DATA CENTER PROFESSIONALS, cooling is as vital a concern as storage capacity and security: Data centers run more efficiently and reliably with the proper temperature, and uptime is everything. Portable cooling options can make a big difference in a temperature-strained environment because of their set-and-forget programmability, built-in automation, and modular and mobile form factors, while more permanent solutions can offer reliable cooling and efficiency. With that in mind, there are several tips and key industry trends you need to be aware of before you purchase cooling equipment.


Consider your current hardware and capacity needs. To make the appropriate cooling purchases, decision makers need to consider their current hardware and capacity needs and provide enough scalability to grow with the organization's future data needs. Gina Dickson, product manager at Black Box Network Services (www.blackbox.com), says the primary concern for any organization is how many BTUs it needs to keep equipment at the appropriate temperature. If you go significantly over capacity, then efficiency suffers; too little capacity, and the cooling equipment won't be able to keep up.

Open or closed loop? Another major consideration with cooling equipment is whether to select an open- or closed-loop system. Open-loop cooling systems utilize a liquid coolant such as water that is exposed to air and the environment. They tend to have a lower initial cost but also require more frequent maintenance and water treatment, and they suffer from reduced efficiency compared to closed-loop systems. A cooling system that utilizes an air- and environment-isolated liquid coolant is commonly referred to as a closed-loop system. Closed-loop systems tend to have a higher initial cost but require less maintenance and provide better cooling efficiency compared to open-loop systems.

Know where the equipment will be used. Consider where the cooling equipment will be operated. Eddie Stevenson, MovinCool marketing manager, suggests analyzing the server room, calculating the heat load, and taking into account all factors that could potentially change your cooling needs, such as, "the number of watts being outputted, if it's facing a window, and any factors that could escalate the heat in that room."

Look for dependable units. Dependability should be top-of-mind. "You want to look at the quality of the manufacturer and choose a product from a manufacturer that has been around for a long time," Stevenson says. He advises enterprises to consider the following: "Are they housing fan motors correctly? Are they welding the casters? With portable units, they get moved around a lot, so make sure they will stand up moving from location to location over time."

Consider alternative cooling methods. Steve Branton, director of marketing at Asetek (www.asetek.com), recommends investigating alternative types of cooling,

such as those that use liquid technology. "A lot of the talk I see about liquid cooling in data centers is really moving liquid-cooled CRAC units from the periphery (outer walls) of the data center closer and closer to the servers," he says. "In-row, rear-door, and some of the top-of-rack coolers are great examples of getting the CRAC units off the walls and closer to the servers." He also suggests using cooling systems that focus liquid cooling on the hottest components (highest heat flux) in the systems, such as CPUs and GPUs, rather than using the liquid to cool air that in turn cools the server. 

BUYERS' CHECKLIST

- ✓ How many BTUs do you need to keep your equipment at the appropriate temperature?
- ✓ Do you need a closed- or open-loop system?
- ✓ Where will the cooling equipment be located?
- ✓ How much of a concern is noise output?
- ✓ Commercial-grade equipment offers superior reliability and durability.

KEY TERMS

BTU (British Thermal Units).

Used to measure the amount of energy required to heat a liquid such as water. A single BTU represents enough energy to raise the temperature of one pound of water by one degree Fahrenheit at a constant pressure of one atmosphere. In the context of cooling equipment, BTUs are listed as a given rating per hour.

Closed loop.

A cooling system that utilizes a liquid coolant that is isolated from air and the environment.

Open loop.

A cooling system that utilizes a liquid coolant that is exposed to air and the environment.

INTRODUCING FIRSTLINE[®] P 160, 200, & 250 kVA

Parallelable, Three-Phase
Double-Conversion On-Line UPS

- Affordable
- Reliable
- Up to 98% Efficient
- Flexible

See Live Demonstrations of the Battery
Monitoring System at NAB—Booth #C1311



FIRSTLINE P
is now available
in 65, 80, 100, 125,
160, 200 & 250 kVA
— 480VAC
and
FIRSTLINE P_L
10-100 kVA — 208VAC

See these products
at NAB Booth #C1311
and register for
a chance
to win
an iPad 3





FIRSTLINE[®] BMS

Proactive Wireless Battery
Monitoring System

- Lifecycle management
—in real time
- Low cost
- Ease of Installation
- Alarm via email & dry contact
- Graphic LCD touch screen



from
your tailored
power
solutions
provider™

STACO ENERGY[®] PRODUCTS CO.

HOTLOK[®]

Rack Airflow Management

The All New Pass Through Blanking Panel



You can just fill a space or...
YOU CAN LOK IN PERFORMANCE

Engineered with Hybrid Brush Technology to provide effective sealing when used in conjunction with pullout KVM switches & where cables prevent solid blanking panels from being installed. Available in both 1U and 2U configurations.



upsite[®]
technologies[®]

Designer & Manufacturer
(888) 982-7800 | www.upsite.com

**NEED OPTIMIZED
RACK COOLING?**

Visit upsite.com

Is your outdated IT infrastructure holding your company back?



It might be just the right speed for someone else.

If your old underpowered servers still have a bit of life left in them, let us take a look. We'll try to put them back into the field—and put some money into your pocket.

Call xByte today at (888) 929-8348 and ask to speak to one of our equipment buyers.



xBYTE
TECHNOLOGIES


911 Commerce Blvd North | Sarasota, FL 34243
(888) 929-8348 | www.xbyte.com

PRODUCT SPOTLIGHT

Data Center Flooring & Accessories

Product

Access Computer Floors



Description


Access Computer Floors has more than 28 years of experience working with raised flooring for high-profile clients such as General Electric, the United States Postal Service, and Morgan Stanley. The company's raised floor system process, including bidding, estimates, purchasing, and installation, is efficient and cost-effective. In addition, the raised floor can be adapted for future modifications.

- Available in wood core, steel, concrete, aluminum, and panels
- Variety of panel options and pedestal systems
- Laminate finish available in 1/16-inch and 1/8-inch thickness
- Can repair flooring and perform routine flooring maintenance
- Used raised flooring available as an affordable alternative

Best For: Enterprises that want the job done on schedule and within budget.

Contact: (201) 594-1292
www.access-computer-floors.com

Access Floor Systems



AccessFloorSystems.com offers everything you'll need for a data center floor, including raised floor panels and components, equipment supports, cable trays, trim materials, grommets, ESD carpet and floor, panel lifters, and antistatic mats. AccessFloorSystems.com has been around for more than 25 years, and it offers same-day shipping on most raised floors, components, and accessories.

- Raised floor systems are available for new and used Tate Bar Concore, Woodcore Panels, Tate All Steel Panels, Tate Concrete Panels, and Tate Aluminum Panels
- Replacement panels and components for new and legacy data centers
- Energy-saving solutions for raised floor penetrations and blanking panels
- High-velocity perforated floor tiles and grates to assist with cooling issues

Best For: Enterprises that are building or remodeling the data center floor and want a company that offers a large selection of products and solutions for legacy data centers.

Contact: (800) 868-8606 | www.accessfloorsystems.com

ASM Modular Systems Raised Access Flooring System



Raised access flooring systems from ASM allow for easy reconfiguration via instant access to wiring and cabling. ASM's raised access floors include technology to address advances in electronic workflow and energy efficiency.


- Incorporates a solid brass positive grounding device in every panel
- Uses nickel chrome plating on critical parts for safety
- Uses a solid tube design that's better than conventional U-shape for high-strength stringers
- Green building elements
- High-pressure laminates available
- Vinyl plastic that's resistant to strong chemicals

Best For: IT administrators who require electrical grounding and want no zinc whiskers and high-strength stringers.

Contact: (866) 516-8531 | www.asmproducts.com

Product

Tate Access Floors In-Floor Cooling Systems



Description


Tate Access Floors designed three new in-floor cooling products for data centers: the DirectAir airflow panel, the SmartAir variable-air-volume damper, and the PowerAir fan-assist module. The DirectAir panel is designed to deliver airflow to server racks at an angle, which allows 93% of the airflow to enter the face of the rack. The DirectAir panel also eliminates bypass air to save on operating expense in new facilities. The SmartAir dampers give admins electronic control over the amount of air passing through an individual panel, which can help save on fan energy when servers are idle. PowerAir is designed to help in dense server racks and blades where a blast of cooling may be needed. PowerAir can be throttled up or down based on power requirements.

- DirectAir panels cool up to 28.5kW per rack and can support a design load of 2,000 pounds
- SmartAir dampers allow each panel and rack tandem to be thought of as an individual zone
- PowerAir modules are easy to install in retrofit applications or in new cooling systems
- Three options provide compelling return on investment

Best For: Data center environments that face the challenges of cooling a high-density, variable-load data center.

Contact: (800) 231-7788 | www.tateinc.com

Upsite Technologies KoldLok® Split Integral Raised Floor Grommet




The KoldLok Split Integral is the industry standard for sealing data centers and raised floor facilities. Its multi-layer brush technology prevents the sagging that's common in competitive grommets. The KoldLok Split Integral greatly reduces costly bypass airflow, increasing usable cooling unit capacity and ensuring maximized efficiency from HVAC equipment.

- Seals cable penetrations with a 96% or greater effectiveness at the demanding static pressures required for high-density cooling as required by data centers
- Split design allows for easy installation around existing cables or re-cabling without removal
- Dresses raw metal edges in compliance with NFPA 75 to protect cables from cutting
- Compliant with Directive 2002/95/EC of the European Parliament and the Council on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)
- **Proudly made in the United States**

Best For: Effectively sealing cable openings at static pressures required for high-density cooling in raised floor environments.

Contact: (888) 982-7800 | www.upsite.com

Upsite Technologies KoldLok Wave® Raised Floor Grommet



The KoldLok Wave is the newest innovation in sealing data centers and raised floor facilities. Its revolutionary patent-pending thermoplastic elastomer sealing technology provides a solid seal and conforms around cable penetrations more effectively than brush grommets. The KoldLok Wave offers the fastest ROI and the longest lifetime value.

- Thermoplastic elastomer material is flame rated UL94-HB
- Split design allows for easy installation around existing cables or re-cabling without removal
- Optional protective cover available for added safety when no cable is present
- Durable ABS frame and cover along with flexible sealing surface engineered to withstand long-term use
- Dresses raw metal edges in compliance with NFPA 75 to protect cables from cutting
- Compliant with Directive 2002/95/EC of the European Parliament and the Council on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)
- **Proudly made in the United States**

Best For: Sealing against wasted bypass airflow in data centers, dramatically improving efficiency and lowering the data center's overall carbon footprint.

Contact: (888) 982-7800 | www.upsite.com

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

Bergvik Flooring
Modular Raised Floor



In the flooring business since 1970, Bergvik offers the strongest, most stable and modular raised floor available for data centers. Bergvik's engineering department supplies CAD drawings that are suited to your needs.

- The Iso Floor system offers custom panels as an option to fit your equipment depths and allows for optimization to build smaller and smarter rooms; floor heights from 12 to 94 inches
- River Cooling Airflow Panels with high-plume fins provide superior air stratification to cool upper servers when compared to flat bottom panels; the unique 36-x 24-foot panel also allows for more server racks
- Earthquake bracing frames will fit any raised floor and are tested to NEBS standards

Best For: Enterprises that are looking to lower energy costs by up to 40% and add more server racks in the same footprint, increasing their revenue stream.

Contact: (410) 548-1449 | www.bergvik.com

PDU Cables Air-Guard Cable Seal



Seal raised floor cable openings with the Air-Guard Cable Seal product line and realize an immediate cost savings in the data center. These products significantly minimize air loss and improve static pressure to cool data center equipment, which helps prevent expensive electrical equipment from overheating. Air-Guard is the only brushed floor grommet line to offer a dual-stage sealing system with the most effective seal in the data center, and the only one to provide a safety cover for increased safety and durability when cables are not going through the raised floor cut-out. For the highest-quality products in the data center marketplace and the most ease in sourcing your sealing solution, rely on PDU Cables.

- Dual-sealing systems provides an effective, economical means to eliminate bypass air through cable cut-outs
- Choose from products with overlapping brushes and/or gasket material to seal your specific cut-out need
- Flexible and simple cable routing via removal of floor tiles without disconnecting equipment

Best For: The most effective cable opening seal in a raised floor data center environment.

Contact: (866) 631-4238 | www.pducables.com

Sealco Tacky Mats



Sealco provides a variety of tacky mats to keep your computer or clean room free of contaminants. Each mat is composed of multiple-layer polyethylene film with a specially treated pressure-sensitive adhesive on one side, which catches the contaminants from shoes or equipment. When sheets gather contaminants, the top sheet can be peeled off to expose a new sheet. The sheets are designed to resist adhesive transfer, preventing sheet-to-sheet de-lamination. Ask about our free removable mat holders that allow easy placement and removal.

- Variety of sizes and colors
- Keeps contaminants away from computer equipment
- Optional company logo imprint
- Mat sheets individually removable and numbered
- Non-beveled edges ensure each sheet is free of contaminants

Best For: Entry ways into computer rooms or any area where dust/dirt can track into the computer room.

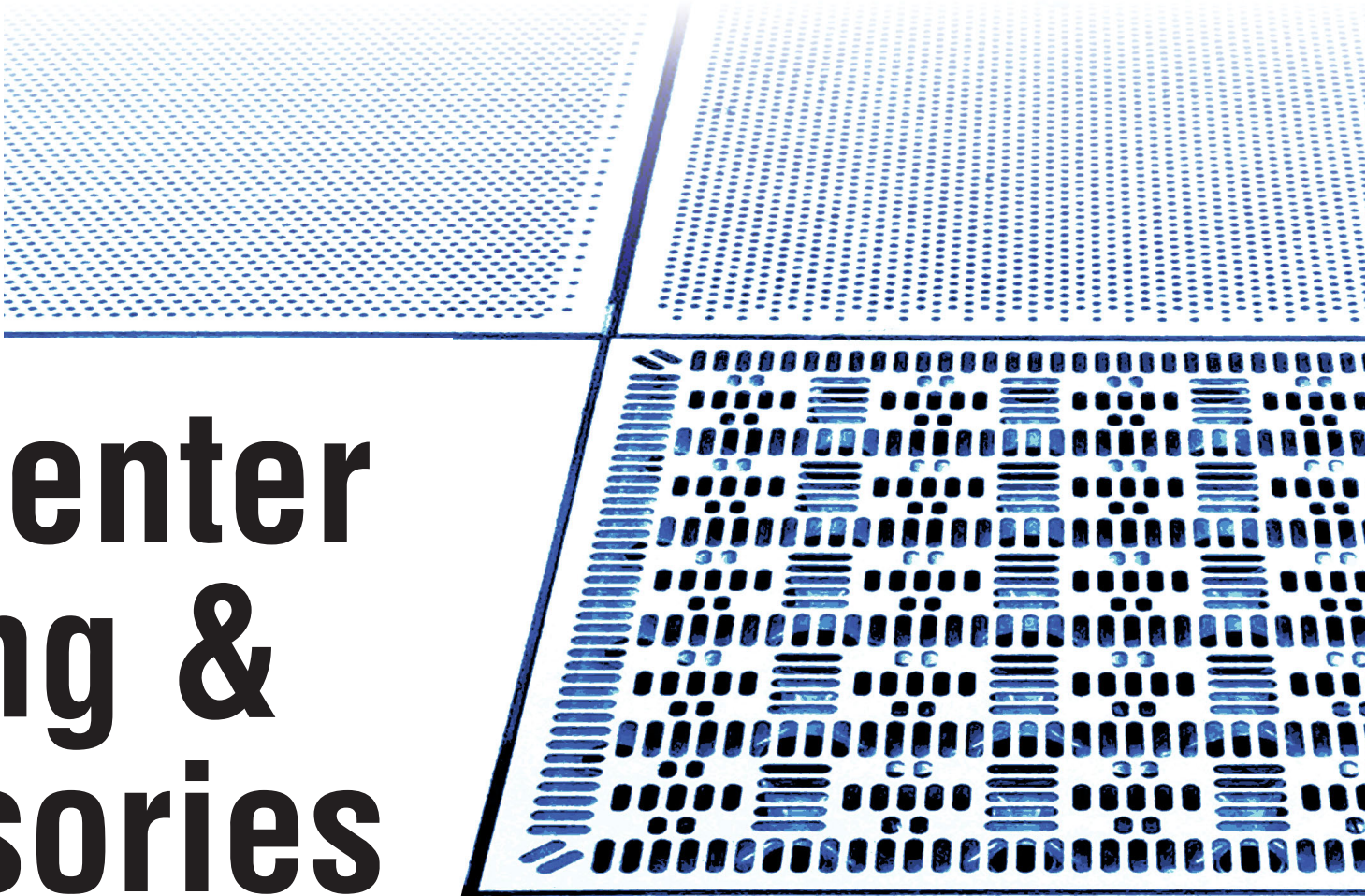
Contact: (972) 234-5567 | www.sealco.net

Do you have a
NEW
PRODUCT
that data center/IT managers
would be interested in learning about?

Send your press release
or related product information to
press@processor.com.

BUYING TIPS:

Data Center Flooring & Accessories



ONE WAY TO DRAMATICALLY cut data center cooling costs is to invest in raised flooring, because it can play an active role in the way you deliver cooling and manage the heat around your servers. Here, we'll identify a few key elements you'll need to think about before you purchase data center flooring and accessories.

Space. "If your data center was built 15 to 20 years ago, it may have been built on a floor that's shallower than what's required today," says Scott Jacobitti, national sales manager for Snake Tray (www.snaketray.com). Most new raised floor construction requires a minimum of 24 to 36 inches, which is primarily to provide airflow under the floor

and cool the electronics in the data center. If you don't have the space available, you may need to redesign the data center flooring to properly handle the heat from your servers.

"In either situation, it's important to plan your under-floor power cabling layout precisely, establishing designated cable pathways," says Ken Koty, sales engineer at PDU Cables (www.pducables.com). "Making sure you purchase your power cables to the proper length will help to limit congestion and minimize air dams that can lead to cooling inefficiencies."

Power requirements. In most cases, power circuits will not change over the lifetime of the data center. If you're moving or plan on moving in the near future to a denser server layout, you'll want to build in the power to handle it. "Maintaining that energy means that you'll need to bring a tremendous amount of cabling under the floor," Jacobitti adds. You'll need a tray that allows for air movement to go through the tray, rather than blocking the air and creating a hot spot.

Cables to cabinets. There are going to have to be some cutouts in the floor for your cables, and you'll want to seal around the cable cut-outs to keep your data center cooling efficient. By installing a grommet with a filler material, you can still have the flexibility to easily access cables without reducing the data center's cooling efficiency.

"In data center floors where cable cut-outs have been made but equipment hasn't been installed and cables haven't been run, having grommets with safety covers in place provides a solid surface for increased durability, safety, and a finished look to the floor," Koty says.

Surface. "You definitely want a nonreactive surface, because you're dealing with a lot of expensive electronic equipment that's susceptible to ground faults and shorts," Jacobitti says. Flooring options are available that are static-resistant; keep in mind that the floor will need to prevent static against a variety of footwear and humidity conditions. Flooring with a traceable ground path is best because it can migrate the electrostatic discharge away from the electrical equipment.

Weight. Make sure that all areas of the data center raised floor are capable of handling server weight and traffic. "The data center is a dynamic space, and your organization will be moving things in and around the floor, so the entire structure needs to be sound," Jacobitti says.

BUYERS' CHECKLIST

- ✓ Will you need a new build-out to meet the space necessary for airflow and cable management?
- ✓ Do you currently have enough power to provide energy for all the servers, and will there be room for expansion in the future?
- ✓ Do you have cable grommets that will prevent the data center's cool air from leaking through raised floor areas where the cables run to the cabinet?
- ✓ Does your data center need an antistatic floor?
- ✓ Are all sections of the data center flooring capable of handling the weight and traffic to which they will be subjected?

KEY TERMS

Base.
The piece that's attached to the deck by a mastic or mechanical fastener; its height will determine how high the finished floor will be.

Head.
Inserts into the base and includes holes to fasten panels or stringers, and there's usually a leveling to let you make fine adjustments to the floor height.

Panel.
The material that makes up the walking surface of a raised floor. Depending on your weight and traffic needs, the panel may be made from steel, concrete with steel reinforcing bars, or aluminum. The interior may be filled with a lightweight material to give you the ability to easily move panels.

Stringer.
A metal channel or square tube that's attached to the pedestal head that forms a grid and provides lateral stability. May either be snapped into place or fastened from the top with a screw.

WHILE YOU WERE OUT

For: You Time: Middle of the night

PROBLEM:

Server went down

Power failure

Water on floor

Temperature high

Did you get the message?


Sensaphone Remote Monitoring Products use redundant communication paths, built in battery backup, and supervised sensors to make sure that when something goes wrong in your computer room

...YOU GET THE MESSAGE

Notification Via:

- Voice Phone Call
- E-Mail
- Text Message
- SNMP Trap
- Pager
- Fax

Now with Wireless Sensors



Get your FREE application guide now

SENSAPHONE[®]

REMOTE MONITORING SOLUTIONS

877-373-2700

www.sensaphone.com

MADE IN THE USA


AIRBLOCK[™]


DATA CENTER SYSTEMS

FlexSim FR[™]

- Fire Rated Vinyl
- Made in the USA

Our New ASTM Fire-Rated Vinyl!






Designed for Your Data Center

Fire protection is an important consideration for data center managers. Simplex has worked hard to develop a fire-rated material that fills your needs. Our goal is to set the standards for hot aisle and cold aisle isolation.


- Developed to meet the stringent demands of data center fire protection.
- Meets ASTM E-84 Class 1 and NFPA 701 standards.
- Also available in an anti-static formula with built-in ESD inhibitors.

Call Simplex or visit our website. See our complete line of curtains, partitions, doors and accessories.



Call your dealer today: **1.800.854.7951**

Email: sales@simplex.net • simplexisolationsystems.com



The Smart Choice for Text Retrieval[®] since 1991

dtSearch[®]

Instantly Search Terabytes of Text

"Bottom line: dtSearch manages a terabyte of text in a single index and returns results in less than a second" – InfoWorld

"Covers all data sources ... powerful Web-based engines" – eWEEK

"Lightning fast ... performance was unmatched" – Redmond Magazine

For hundreds more reviews & developer case studies, see www.dtSearch.com

Highlights hits in a wide range of data, using dtSearch's own file parsers and converters

- Supports MS Office through 2010 (Word, Excel, PowerPoint, Access), OpenOffice, ZIP, HTML, XML/XSL, PDF and more
- Supports Exchange, Outlook, Thunderbird and other popular email types, including nested and ZIP attachments
- Spider supports static and dynamic web data like ASP.NET, MS SharePoint, CMS, PHP, etc.
- API for SQL-type data, including BLOB data

25+ full-text and fielded data search options

- Federated searching, advanced data classification objects, and special forensics search options

APIs for C++, Java and .NET through 4.x

- Native 64-bit and 32-bit Win / Linux APIs; .NET Spider API
- Content extraction only licenses available

Desktop with Spider

Publish (portable media)

Engine for Win & .NET

Network with Spider

Web with Spider

Engine for Linux

Ask about fully-functional evaluations!

www.dtSearch.com

1-800-IT-FINDS

Sentry Power System[™]

More Intelligent.

More Reliable.


Easier To Manage.

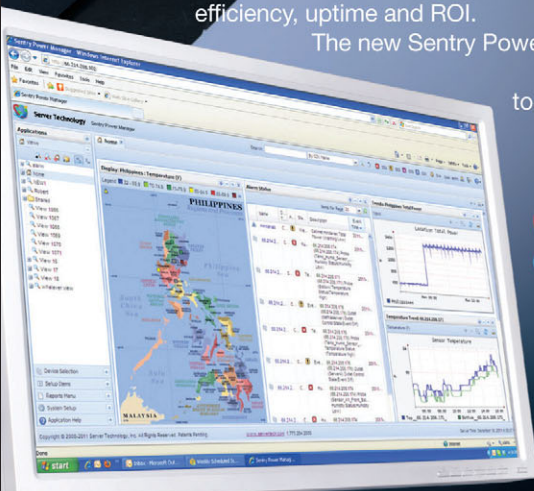
The industry's only data center rack-level power system. Only from Server Tech.


You want the world's most reliable power distribution units. You also want data center power monitoring, management and analytics, for multiple locations. And, you want to auto discover, group configure and manage your entire PDU network from a user friendly dashboard. You need Server Tech's Sentry Power System.

It's a SNAP. We've combined our Sentry PDUs with our award-winning Sentry Power Manager to give you one incredible critical system. Featuring our exclusive SNAP technology with "Plug & Play" functionality, you can configure hundreds or thousands of PDUs with a mouse click. You get an entire system to help you drive energy efficiency, uptime and ROI.

The new Sentry Power System[™]. Only from Server Tech. Learn more today at www.servertech.com







Server Technology

Quality Rack Power Solutions

www.servertech.com

1-800-835-1515


©2012, Server Technology, Inc.

PRODUCT SPOTLIGHT

Blade & Rackmount Servers

Product

Aberdeen AberSAN ZXP



Description

Aberdeen's AberSAN ZXP gives enterprises the simplicity of a NAS server within a SAN environment by combining block-level iSCSI and Fibre Channel connections with multi-user network sharing. The AberSAN ZXP is efficient, easy to use, and flexible, featuring unlimited snapshots and unlimited file system sizes; it's also expandable up to 4U and scalable, meaning enterprises can add memory or CPU performance as needed.


- End-to-end data integrity
- Thin provisioning
- Block- and file-based replication
- In-line deduplication
- Shared storage pools from any combination of storage hardware

Best For: Enterprises looking for a flexible solution that will allow them to add computing power or capacity as their needs grow.

Price: Starts at \$30,806

Contact: (800) 500-9526 | www.aberdeeninc.com

Aberdeen Petarack



Based on Nexenta's Nexentastor ZFS file system, the Petarack from Aberdeen is a storage powerhouse that can hold 1 petabyte on its own or can be scaled to hold up to 5 petabytes of data with additional racks, all at a price point that's attainable for smaller enterprises. It features an intuitive Web-based interface and is cloud- and virtualization-ready, offering such features as 128-bit addressing, thin provisioning, and unlimited snapshots. Each head unit features dual Xeon processors and 48GB of memory, which is expandable to 192GB.


- Built-in enterprise-level 10GbE iSCSI target, with option for Fibre Channel
- ZFS file system for fast, secure, scalable storage
- Block- and file-based replication
- Integrated search function
- Includes LCD-KVM
- Hot-swap hard drive bays with in-rack access
- Onsite installation
- Five-year warranty

Best For: Small and midsize companies that need scalable, manageable storage at a price that won't break the bank.

Price: \$495,000

Contact: (800) 500-9526 | www.aberdeeninc.com

Aspen Systems Summit C220I.1F 2U Twin2 Server



The Summit C220I.1F packs unprecedented computing performance and data capacity inside a space-saving, energy efficient 2U chassis. The Summit C220I.1F includes four hot-pluggable systems (nodes). Each of these nodes supports dual processors using the latest Intel Xeon E5-2600 Series, Romley CPUs. Each node holds up to 256GB of ECC Registered Memory and three, Hot-Swap, 3.5" SAS/SATA hard drives.

- 2U 4-Node Rackmount Server
- Dual Socket Intel Xeon E5-2600 Series Processors (per node)
- Eight DDR3 DIMM Sockets (Up 256GB DDR3 ECC Reg) (per node)
- Three 3.5-inch Hot-swap SAS/SATA hard drive bays (per node)
- Dual-Port Gigabit Ethernet (per node)
- 53Gbps FDR Infiniband
- IPMI KVM over LAN support
- 1620W High-Efficiency Redundant Power Supply


Best For: High-density data centers and high-performance computing applications and clusters.

Price: Starts at \$8,200

Contact: (888) 227-1286 | www.aspensystemsdirect.com

Product

Portwell CAR-1000



Description


Unlike commercial motherboard-based systems, the CAR-1000 1U rackmount communication appliance from Portwell features a reset button that will change the system back to the manufacturer's default setting, if required. CAR-1000 is also perfect for customers who need six Gigabit Ethernet ports and applications that require the high performance and low power consumption of Intel's dual-core Atom D510 processor. CAR-1000 is offered with a choice of three Intel Atom processors—single-core N450 or D410 and dual-core D510—for flexible customized configuration.

- Intel Atom D510, D410, or N450 processor and ICH8M I/O controller
- Supports fanless solutions when built with Intel Atom processor N450
- Up to 4GB DIMM with D510/D410; up to 2GB DIMM with N450
- Six Gigabit Ethernet ports with two bypass segments
- Mini PCI slot for Wi-Fi and Crypto card option

Best For: Network security solutions to SOHO and remote/satellite offices.

Contact: (877) 278-8899 | www.portwell.com

Portwell CAR-4010




Portwell's CAR-4010, a functional and modular 1U rack-mount communication appliance, is based on the Intel C206 chipset, which offers a wide range of CPU support, including Intel Xeon E3-1200 processors and Intel Core i3-2120 processors. CAR-4010 is a modular platform designed to help customers maximize flexibility and cost savings. Customers have options to install two PCI-E add-on cards or additional Portwell Ethernet modules. CAR-4010 also supports IPMI 2.0 remote network monitoring and management.

- LGA1155 Intel Xeon E3-1200 Series processors and Intel C206 chipset
- Dual-channel DDR3 1333/1066 memory platform, up to 16GB
- Eight onboard RJ-45 Gigabit Ethernet ports with PCI-E Gen. 2.0 technology
- Two software-controlled Gen. 2 bypass segments

Best For: Server virtualization and network security solutions for midsized and large enterprises.

Contact: (877) 278-8899 | www.portwell.com

SRC Computers, LLC Scalable Systems & Servers



Scalable multi-rack systems and servers from SRC Computers feature the new reconfigurable Series J MAP[®] processors and can reduce the footprint and power consumption by orders of magnitude compared to microprocessor-based systems, while meeting the needs of the most demanding applications. Using the Carte[™] Programming Environment, these systems are also very programmer-friendly and fully software-compatible with SRC Computers' embedded and desktop products.

- Housed in 19-inch 35U racks
- Includes system console, power management system, and network switch
- 28U available for customer-selected nodes
- Cluster configuration offers scalability and flexibility
- Hi-Bar[®] Switch Network with Multi-Ported Common Memory configuration allows for additional capability of managed data movement

Best For: Compute-intensive or data movement applications in such areas as textual search, signal processing, image processing, medical imaging, and financial analytics.

Contact: (719) 262-0213 | sales@srccomputers.com www.srccomputers.com

PRODUCT SPOTLIGHT

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

eRacks NAS50



The NAS50 Network Attached Storage file server from eRacks is a fully customizable server with the capacity to store 200 terabytes of data. The NAS50 supports SAS or SATA hard drives and works with either Intel or AMD processors, including Intel's Sandy Bridge Xeon series in either single, dual, or quad configurations. AMD options also include dual and quad configurations with AMD's Opteron series. The server specializes in Windows and open-source operating systems.

- Ultra-fast 6Gbps transfers with SATA III
- Chassis dimensions: 15.6 x 16.9 x 27.2 inches (HxWxD)
- Includes a one-year full warranty and three-year limited warranty
- Choice of Intel or AMD processor and configuration
- Can be fitted with 512GB of DDR3 memory, 10GbE Network cards, and 6GBps RAID controller cards
- Hot-swap 3.5-inch SAS/SATA drive bays

Best For: Cloud admins who want more storage for their users and data center managers looking for enterprise-level, high-performance open-source rackmount servers that include the latest products and are easily upgradeable.

Contact: (714) 532-5322 | eracks.com

eRacks STUDIO7



The STUDIO7 from eRacks is an audio creation and production computer system accommodating up to 24GB of DDR3 memory. This customizable rackmount chassis accommodates four 5.25-inch drive bays used as either removable hot-swap storage or DVD-ROM drives. The STUDIO7 is an ultra-quiet rackmount, with noise levels below 32Db. The system is preloaded with a set of open-source audio and video software applications with no licenses or upgrade fees required.

- Linux-based and includes Intel Core i7 CPU and Intel X79 chipset
- Packaged with Maudio and Nvidia audio and video devices
- Solid-state drives standard
- Integrated USB3, SATA3 controllers
- Standard chassis dimensions: 5.25 x 19 x 20.8 inches (HxWxD); shorter depth chassis available
- Includes a one-year full warranty and three-year limited warranty
- Integrated Gigabit Ethernet
- Two PCI slots and PCI-E for added network connectivity, graphics, audio, etc., and front USB connector

Best For: Those looking for a professional, studio-level audio and video server with open-source software applications.

Contact: (714) 532-5322 | eracks.com

Hardcore Computer Liquid Blade Server



The Liquid Blade Server from Hardcore Computer is the only rack-mounted high-performance server with patented total submersion technology, a revolutionary cooling system that is 1,350 times more efficient by volume than air cooling. Submersion technology keeps servers running cooler and more reliably with the highest level of sustained performance. Liquid Blade eliminates the requirement for inefficient and expensive air-conditioning systems, reducing cooling costs by as much as 80%.

- Exceptionally fast, smart, and reliable dual Intel Xeon 5500 and 5600 CPUs
- Available Intel Xeon 5698 CPUs with guaranteed over-clocking beyond 4.7GHz
- Ultimate simulation/visualization server featuring Nvidia Tesla and Quadro GPU cards
- 40Gbps InfiniBand, 10Gbps Ethernet, and other connectivity options available
- Up to six SSDs supported by motherboard SATA II

Best For: High-performance data center and grid computing applications where reliability and availability are mission-critical.

Price: Starts at \$5,684

Contact: (866) 530-0101 | www.hardcorecomputer.com

Supermicro SuperBlade TwinBlade



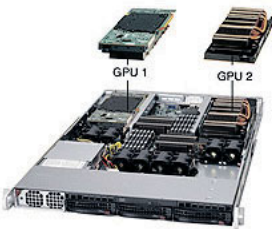
The innovative TwinBlade doubles the number of dual-processor compute nodes per 7U enclosure to 20, allowing for up to 120 DP servers per 42U rack for a dense, cost-effective solution. Based on the SBI-7226T-T2 blade supporting the latest Intel Xeon 5600 Series processors, this system delivers unprecedented performance per dollar and per square foot. Available with dual 40Gbps QDR InfiniBand switches, this blade solution features industry-leading 94% power supply efficiency.

- 20 DP (Intel Westmere and AMD G34) nodes in a 7U enclosure
- 128GB ECC-registered DDR3 per DP node
- Dual 40Gb InfiniBand, 10GbE, and 8Gb FCoE switches
- Dual 1/10Gb Layer 2/3 Ethernet switches

Best For: High-performance computing in data center, enterprise, and cloud computing deployments.

Contact: (408) 503-8000 | www.supermicro.com

Supermicro SuperServer 6016GT-TF-FM205



The 1U SuperServer 6016GT-TF-FM205 rackmount server from Supermicro features an Intel Xeon 5600/5500 processor and 192GB of DDR3 1333/1066/800MHz ECC registered DIMM. The SuperServer 6016GT-TF-FM205 also features the Super X8DTG-DF motherboard (with dual 1,366-pin LGA sockets).

- Supports RAID 0, 1, 5, and 10
- Comes integrated with two Nvidia Fermi M2050 GPU cards
- IPMI 2.0 with support for virtual media over LAN and KVM over LAN
- Intel 82576 dual-port Gigabit Ethernet controller with support for 10BASE-T, 100BASE-TX, 1000BASE-T, and RJ-45 output
- 80 PLUS Gold Certified power supply

Best For: Environments that would benefit from high compute density and uniform large-scale deployment-based rackmount solutions.

Contact: (408) 503-8000 | www.supermicro.com

xByte Technologies Dell PowerEdge R510



The Dell™ PowerEdge™ R510 is a two-socket rack server featuring massive storage potential; advanced remote management; multiple RAID options; and an ideal balance of drive capacity, processing power, redundancy, and value in a 2U chassis.

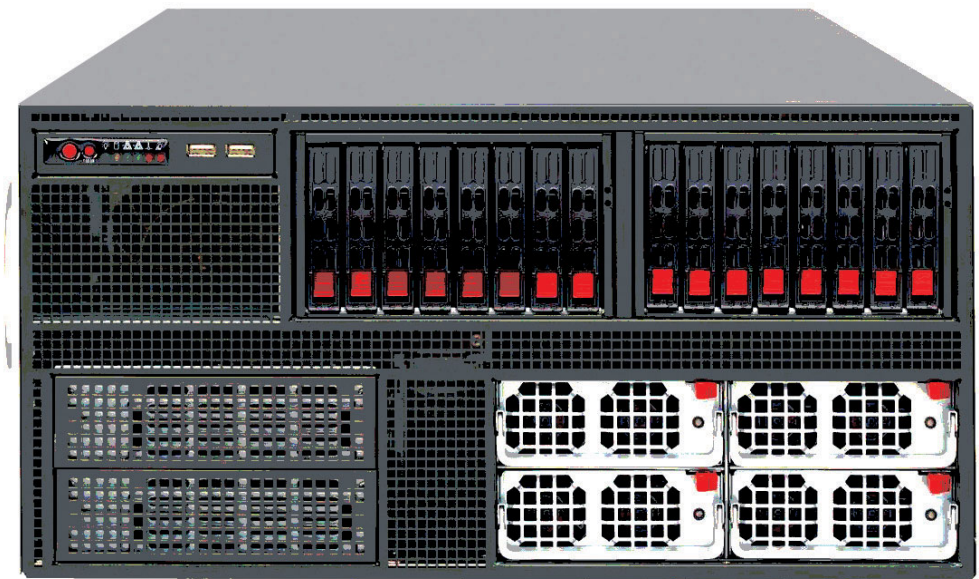
- Up to 12 hard drives and 24TB of storage
- Processing power with up to 12 total cores
- 128GB maximum memory
- Reduced rack space with small 2U chassis

Best For: Server virtualization, database servers, small and midsized business applications, and multiple Web servers.

Contact: (888) 929-8348 | sales@xbyte.com
www.xbyte.com

BUYING TIPS:

Blade & Rackmount Servers



BUYING A NEW SERVER takes significant prep work. Beyond pinpointing the data center’s exact needs and how the server will meet them, there are budgetary, future-proofing, compatibility, and vendor considerations to address, as well. To ease the task, consider the following.

Determine what’s important. Charles King, president and principal analyst at Pund-IT, counts CPUs, memory, and I/O as the most critical server features, though their relative importance depends on the application and workload they’ll support. Companies running a business-critical database or online transaction program, for example, should eye a higher-end CPU/system than what’s needed for general-purpose applications. For virtualization-related use, spend more for extra memory and I/O. Max Haskvitz, general manager of eRacks (www.eracks.com), considers stability (quality components, trustworthy CPU and memory combo, etc.), redundancy (RAID and RPS availability), and compatibility with your current environment and software important. Upgradability is also vital, he says: “Why would you spend thousands or even millions on servers that you can’t use two years down the line?”

Virtualization and consolidation. John Sloan, lead analyst for virtualization and consolidation at Info-Tech Research Group, says that unlike the distributed processing world in which servers had a one-to-one relationship with applications, consolidation and virtualization are becoming the norm today. This year, Info-Tech found that among organizations it surveys, more than half of their server workloads were running on virtual machines on average, Sloan says.

In this space, Sloan says it’s important to know how a new server will fit into a consolidated stack that includes servers, networks, and storage. Unlike distributed models, “in a consolidated infrastructure, the server is a unit of hard capacity (processing and memory) that’s combined with networks and storage in a resource pool that’s partitioned up into virtual entities.” Increasingly, he says, enterprises aren’t buying servers but blocks of capacity. What differentiates current offerings “is how the interconnects are managed and how the whole thing is managed as one resource pool,” he says. Typically, blade

servers are the form factor for consolidated offerings, he says.

Trends to watch. Haskvitz says most trends for servers currently are cloud-related. Here, multiple-node servers are a great investment, he says. King advises IT to “bone up on the underlying technologies in cloud and determine whether they could benefit from engaging with cloud service providers or SaaS vendors.” Haskvitz says larger-density, smaller-footprint systems represent another server-related trend, while King says numerous vendors are leveraging flash and SSDs to provide a substantial boost to overall system performance and advises that companies that consider high-end processing and performance important “should definitely take a look at it.”

Budgetary considerations. “A good vendor should leave you with no questions,” Haskvitz says, but because enterprises

are different, this sometimes can be difficult to accomplish. Questions should focus on the support you can expect, whether devices have been tested in environments similar to yours, how the vendor’s brand compares to your current brand, whether cost-savings are built in, and how long the vendor anticipates the units will be available. Budget-wise, some new vendors try to make the majority of their money on support or software, he says. A competent IT department that can find an open-source solution for its appliance or application needs, he says, can probably cut up to 50 to 60% of the cost. Additionally, Sloan says, “In any infrastructure purchase, the upfront capital acquisition cost is just part of the deal. Three- to five-year total costs should be calculated, including maintenance and facilities costs.” **P**

BUYERS’ CHECKLIST

- ✓ Match the application and workload the server will support to the CPU, memory, I/O, storage, and other components they’ll require.
- ✓ Recognize that virtualization, consolidation, and cloud computing are trending areas where servers are concerned.
- ✓ Ensure the vendor satisfies all questions concerning support, compatibility, performance, etc.

KEY TERMS

- Configuration.**
Refers to a server’s makeup in terms of components (CPU, memory, storage, etc.), OS, and the like.
- TCO.**
Server-wise, total cost of ownership includes the server’s initial acquisition cost but also associated maintenance, facilities, cabling, and other expenses covering three to five years.

For Sale:

A10 Networks AX2500 64-bit New Generation Server Load Balancer



- Intelligent Layer 4-7 application processing capabilities
- Industry-leading performance and scalability
- Unique Advanced Core Operating System (ACOS) offers true scalable performance
- Integrates into any data center to enable advanced Web application delivery solutions
- Comprehensive set of IPv6 and Network Address Translation (NAT) features
- Advanced server load balancing and flexible health monitoring capabilities
- Redundant components and high-availability design

Layer 4 Throughput:	11Gbps
Layer 4 CPS:	300K
Ethernet Interface:	Gigabit Copper 8 Gigabit Fiber SFP 4
Power Supply:	Dual 400 W
Dimensions:	1.75 x 17 x 21.8 inches (HxWxD)
Rack Units:	1U
Management Interface:	Yes
Console Port:	Yes
Solid State Drive:	Yes

(4) available; asking \$12,000 each

Contact: Edward Jondle
Phone: (402) 458-4401



Prepare For The Unexpected With **Room Alert**™

No one knows when or how disaster will strike. We just know the potential is always there. So preparation is crucial to minimizing its impact on computers, networks, users & business.

When disasters occur, there are significant costs in areas that go far beyond the simple replacement of damaged hardware. This is because what happens in the data center or other facility effects the entire organization. If disaster strikes your facility, how will it impact business? Who will get the blame? Could it have been prevented? What will it cost?

AVTECH has a full line of powerful, scalable **Room Alert** solutions for real-time environment monitoring in a computer room, data center or other facility. All models arrive assembled with easy to install hardware, cables, sensors, easy-to-use logging & alerting software, printed documentation, unlimited technical support and a '30-Day Satisfaction Guarantee'. Users can typically install in under 10 minutes.

Room Alert products monitor critical environment conditions like temperature, power, humidity, flood, smoke, room entry, air flow, motion and more, alert staff by any method and can take automatic corrective action. There is a model that is right for any organization and budget... yours too!



*Solutions
Start At \$195*

Room Alert products can monitor:

- Temperature
- Humidity
- Heat Index
- Main / UPS Power
- Flood / Water
- Room Entry, Motion
- IP Network Cameras
- Smoke / Fire
- Air Flow
- Sound, Light
- Panic Buttons
- Dry Contacts
- Switch Sensors
- Wireless & More

Call or Visit Us Online Today



888.220.6700 • 401.628.1600
AVTECH.com

Protect Your IT Facility... **Don't Wait Until It's Too Late!**™

* AVTECH is the worldwide leader of IT & facilities environment monitoring products. Purchase online at EnvironmentMonitor.com. Reseller inquiries welcome.



800-306-2199 www.digiliant.com/pcm
Reliability-Performance-Affordable Price

NO EXCUSE, NO COMPROMISE

Digiliant's NAS and iSCSI Storage Servers provide your business a more efficient and economical way for data storage. By utilizing high performance RAID controllers and powerful server platform, our Storage Servers deliver robust data protection for your business. The easy-to-use software helps you manage your ever-expanding data with ease.

Solid State Storage 2U - 24 Bay
Starting at \$9,925



- Data Capacity from 3TB to 12TB
- 24 Hot-Swappable 2.5" Solid State Drive Bays
- Adaptec RAID Controller
- RAID 0, 1, 10, 5, 6, 50, 60 Supported
- Support up to two Quad-Core Xeon Processors
- Dual Gigabit Network Cards
- Windows Storage Server 2008 R2 or Linux OS

8U - 81 Bay
Starting at \$15,995



- Data Capacity from 40.5TB to 243TB
- 81 Hot-Swappable SATA/SAS Drive Bays
- Adaptec RAID Controllers
- RAID 0, 1, 10, 5, 6, 50, 60 Supported
- Dual Quad-Core Xeon Processors
- Dual Gigabit Network Cards
- Windows Storage Server 2008 R2 or Linux OS

For more information or to place an order, please call us at 800-306-2199 or visit us on the web at www.digiliant.com/pcm



1U - 4 Bay
Starting at \$1,965

- Data Capacity from 2TB to 12TB
- 4 Hot-Swappable SATA/SAS Drive Bays
- Adaptec RAID Controller
- RAID 0, 1, 10, 5, 6 Supported
- Support up to two Quad-Core Xeon Processors
- Dual Gigabit Network Cards
- Windows Storage Server 2008 R2 or Linux OS



2U - 12 Bay
Starting at \$4,035

- Data Capacity from 6TB to 36TB
- 12 Hot-Swappable SATA/SAS Drive Bays
- Adaptec RAID Controller
- RAID 0, 1, 10, 5, 6, 50, 60 Supported
- Support up to two Quad-Core Xeon Processors
- Dual Gigabit Network Cards
- Windows Storage Server 2008 R2 or Linux OS



3U - 16 Bay
Starting at \$4,550

- Data Capacity from 8TB to 48TB
- 16 Hot-Swappable SATA/SAS Drive Bays
- Adaptec RAID Controller
- RAID 0, 1, 10, 5, 6, 50, 60 Supported
- Support up to two Quad-Core Xeon Processors
- Dual Gigabit Network Cards
- Windows Storage Server 2008 R2 or Linux OS



4U - 24 Bay
Starting at \$5,675

- Data Capacity from 12TB to 72TB
- 24 Hot-Swappable SATA/SAS Drive Bays
- Adaptec RAID Controller
- RAID 0, 1, 10, 5, 6, 50, 60 Supported
- Support up to two Quad-Core Xeon Processors
- Dual Gigabit Network Cards
- Windows Storage Server 2008 R2 or Linux OS



4U - 36 Bay
Starting at \$7,850

- Data Capacity from 18TB to 108TB
- 36 Hot-Swappable SATA/SAS Drive Bays
- Adaptec RAID Controller
- RAID 0, 1, 10, 5, 6, 50, 60 Supported
- Support up to two Quad-Core Xeon Processors
- Dual Gigabit Network Cards
- Windows Storage Server R2 or Linux OS



Eaton solutions help you save space and money.

Double Conversion UPS technology for 100% compatibility with any application, environment or genset and high output to protect equipment with PFC power supplies.

Wide input voltage window to conserve battery time for blackouts only.

Automatic by-pass for high availability.

Extended runtime capabilities with multiple, hot-swappable battery modules (optional).

Remote reboot of locked equipment, sequential start-up through individually switchable outlets.



Ref BLADE



RACKMOUNT
SOLUTIONS
Focused on U™


Call 866-207-6631
www.rackmountsolutions.net

PRODUCT SPOTLIGHT

Colocation Providers

Product

360 Technology Center Solutions



360TCS

Description


360TCS, LLC is a premium provider of enterprise-level colocation and data center services. Strategically located in the Chicago suburbs, the 360TCS data center features an ultra-efficient, environmentally friendly Tier III design providing our clients with 100% uptime. As an SSAE-16 Type II audited facility, the 360TCS data center provides a physically secure, fully redundant environment, ideal for supporting mission-critical data and hardware deployments.

- Power densities in excess of 32kW per cabinet
- 24/7 onsite security and surveillance
- Reliable connectivity with access to multiple carriers
- 2N redundant, energy-efficient chilled water cooling system
- Cost-effective, customizable solutions
- Multiple levels of support and remote hands services available

Best For: Enterprises looking to add a level of redundancy to their IT infrastructure. Ideal for high density deployments of blade server technology, power-hungry storage arrays, and high performance computing clusters.

Contact: (888) 313-1306 | www.360tcs.com

CoreSite




CoreSite, operating since 2001, offers customized data center services for any need. The company offers flexible services in order to exceed standard colocation operations, providing a range of sizing, cooling, power, and space options. CoreSite data centers are designed with reliability, scalability, and flexibility in mind. All colocation solutions in CoreSite's 2 million square feet of data center space are adaptable according to the customer's requirements.

- Cabinet by cabinet, private cages, and private data center suites available
- Cage power densities up to 300W per square foot
- Cooling facilitates up to 15kW per cabinet
- Flexible cage space: 100 to 5,000+ square feet

Best For: Enterprises that need flexible, custom-fit solutions for colocation services.

Contact: (866) 777-2673 | www.coresite.com

CoreXchange



From smaller-scale, affordable Half Cabinet options to Private Cages for customers needing more space, CoreXchange has the right size of solution to meet any enterprise's needs. All of CoreXchange's colocation solutions are available for purchase online and provide customizable power, bandwidth, and network features to ensure that you get the performance you need for a price you can afford.


- Power, bandwidth, and IP addresses
- Burstable or unmetered bandwidth options
- Bandwidth from 1Mbps to 1000Mbps (up to 10 Gig available)
- Selections for redundant power drops, network hand-offs, and cross-connects
- SSAE 16 SOC 1 Type II-compliant data centers
- 24/7/365 onsite NOC support with free remote hands and eyes services, including reboots

Best For: Any company looking for a reliable, secure colocation solution with always-available support.

Contact: (877) 271-7737 | www.coreexchange.com

Product

NetSource Communications



Description


NetSource Communications, a hosting solutions provider located just outside of Chicago, offers colocation services with the rack space, power, bandwidth, and security for any enterprise. NetSource offers advanced managed services with a colocation agreement, including firewalls and data backups. Experienced technicians are on hand for support and to help customize a server architecture for any particular need.

- N+1 redundancy built into the data center infrastructure
- Variety of colocation and managed service packages available
- Strict security with 24/7/365 video surveillance
- Unique options for different sizing or pricing needs
- Low latency bandwidth, with almost unlimited bandwidth available
- Flexibility in power needs

Best For: Enterprises in need of a colocation solution with a variety of sizing and pricing options.

Contact: (866) 778-1212 | www.ntsourc.com

OCOSA Communications



OCOSA Communications is a family owned and operated facilities-based provider headquartered in Tulsa, Okla. From hosting to connectivity and data center to IT consulting, OCOSA can tailor a solution to fit your needs. OCOSA understands the small business and specifically the cycle of business. For almost a decade, OCOSA has been tailoring solutions for businesses in almost every market vertical. Upgrade to OCOSA and let them work for you.

- Shared and dedicated hosting
- Shared and private cloud hosting
- Colocation (single servers, half to full cabinets, and custom rooms)
- Metro Ethernet, dedicated Internet access, and MPLS connectivity
- IT consulting and support
- Online backup and disaster recovery

Best For: SMBs wanting a hosting solution specifically tailored to their organization's needs.

Contact: (866) 93-OCOSA | www.ocosa.com

OnRamp HIPAA-Compliant Colocation



OnRamp's data center team of HIPAA implementation experts works with its data center customers to build a comprehensive, HIPAA-compliant hosting solution that addresses the confidentiality, availability, and integrity of electronic personal health information. OnRamp has developed a 3-step process, rooted in the company's highly secure managed hosting, cloud computing, and colocation services, to diagnose, assess, and manage any threats, vulnerabilities, and risks to your IT infrastructure.

- OnRamp HIPAA-Compliant Colocation services meet the rigorous HIPAA compliance standards
- OnRamp 3-step HIPAA Risk Management Process assists each customer in making appropriate decisions as to how to use OnRamp's services to effectively and efficiently protect the customer's sensitive patient data
- OnRamp features the highest levels of security, reliability, redundancy, technical expertise, and monitoring 24/7/365 for HIPAA-Compliant Colocation

Best For: Any company that works with healthcare data and patient records.

Contact: (888) 667-2660 | www.onr.com

PRODUCT SPOTLIGHT

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

FORTRUST



FORTRUST is a premium data center services company delivering high-availability enterprise infrastructure services to the business community. FORTRUST's premier offerings include adaptable colocation space for any size enterprise supported by highly reliable power and cooling infrastructure, connectivity, and physical security, as well as a comprehensive suite of managed services to safeguard mission-critical business services.

- 224,000-square-foot facility located in Denver
- Highly reliable critical systems infrastructure featuring 2N+1 UPS distribution
- Layered 24/7 onsite security, Network Operations Center, and customer support staff
- Carrier-neutral connectivity options from a variety of popular carriers
- SSAE 16 SOC 1 Type 2 and SOC Type 2 compliant facility

Best For: Companies seeking colocation services with a focus on uptime, risk mitigation, and value-added services.

Contact: (866) 976-9379 | www.fortrustdatacenter.com

Green House Data



an economically responsible data center

Green House Data is an enterprise class colocation facility delivering state of the art services to businesses of all sizes. Our customers rest assured that their critical applications are always available in our N+1 redundant, highly secure facility. Our experienced employees are always happy to assist with any infrastructure needs. Powered entirely by renewable wind power, our energy efficiency is 40% better than typical data centers. We pass this power savings to our clients to offer highly competitive rates on all of our services.

- Cloud hosting, managed hosting, and disaster recovery also available
- 100% service level agreements
- 24/7/365 network monitoring, support, and access
- 10Gbps to 40Gbps point to point and Internet access available
- SSAE 16, Type II Compliant

Best For: Video and digital imagery companies that are looking for a reliable, highly available colocation facility that provides a sustainable business model at affordable prices.

Contact: (866) 995-3282 | www.greenhousedata.com

Hostway



Hostway is a colocation provider with data centers located in the United States and Canada. Hostway's new hybrid solution blends colocation services with cloud services for a customized configuration for any enterprise's hosting needs. Organizations are able to leverage prior investments in infrastructure and utilize colocation for legacy applications that cannot be migrated to new servers. Hostway provides colocation with the ability to connect to either public or private clouds for disaster recovery, burst capacity, and other Web needs.

- Flexible pricing options with ability to shift contracted spend if needs change
- State-of-the-art security with 24/7 live monitoring and tech support
- Various sizes of cabinets available to fit any need
- Managed firewall, intrusion detection, load balancing, database administration, and more available

Best For: Enterprises wanting an experienced colocation provider with a proven track record to keep your data secure and available.

Contact: (866) 467-8929 | www.hostway.com

RockyNet Data Center & Cloud Solutions



RockyNet personalizes its offerings to meet your business needs. In business since 1996, the company's experts have the knowledge and experience necessary to guide you to your goals. RockyNet has 24/7/365 onsite technical support to ensure that your mission-critical data is kept safe and secure. Its SAS-70/HIPAA-compliant data center offers colocation, managed servers, Web hosting, and virtual cloud machines in order to provide all of your data services. RockyNet provides redundant sites, UPS/generator power, N+1 cooling, multiple Gigabit Ethernet ports, and static-free raised flooring. Whatever your needs, RockyNet's tech team will work with your enterprise's tech team to find the best solution for you.

- Colocation, managed servers, and virtual cloud machines
- Third rack, half rack, full rack, and private cages
- 24/7/365 onsite support
- HIPAA and SAS-70 compliant

Best For: Businesses that would like assistance in their physical or cloud approach to colocation.

Contact: (303) 444-7052 | www.rockynet.com

Starpoint Digital



Located 30 miles outside of Chicago, the Starpoint Digital data center offers colocation services geared toward medium to large-sized businesses. Service is fast, secure, and reliable, with both managed and unmanaged colocation offerings. Additional features include both high-level and low-level tech support, IP addresses, DNS hosting, device monitoring, and more.

- Shared and private colocation
- VoIP cloud PBX
- Cloud server and desktops
- T1 and fiber dedicated access
- Managed backup, firewall, and SQL

Best For: Enterprises looking for inexpensive shared rack space with a variety of added features.

Contact: (877) 968-7638 | www.mystarpoint.com

Vaultas



Based in Minnesota, Vaultas specializes in state-of-the-art, highly secure colocation facilities where its customers can store mission-critical data, whether for real-time daily access or secure offsite backup or storage. The company offers fast, reliable Internet access and turnkey IT services that guarantee access to your data in the event of an emergency. Vaultas' data center and business continuity services are vendor-neutral and meet compliance requirements for such regulations as Sarbanes-Oxley.

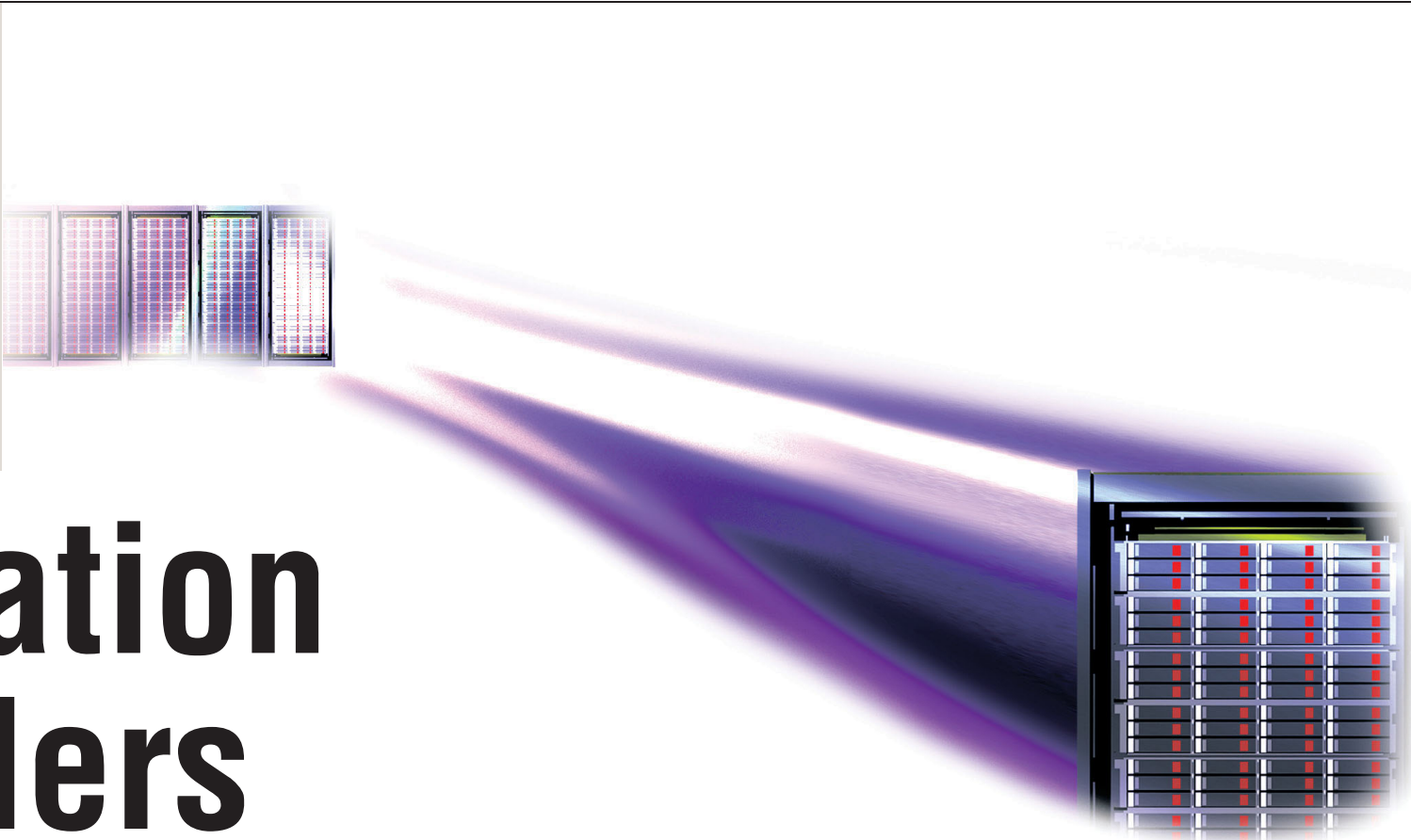
- Reduced total cost of ownership through energy conservation and vendor collaboration
- Disaster recovery, business continuity, colocation, data storage, and network and VoIP services
- Emphasis on security, reliability, and regulatory compliance

Best For: Companies looking for a reliable disaster recovery option for their mission-critical data and services.

Contact: (800) 998-2858 | www.vaultas.com

BUYING TIPS:

Colocation Providers



COLOCATION FACILITIES are great for companies that need to grow their existing infrastructure, move their systems to an offsite facility, or have a solid option in place for disaster recovery. One of the biggest benefits of colocation, however, is the potential savings.

“Traditionally, companies that choose to build their own data centers have to spend additional capital upfront to ensure that the data center will be capable of handling their short-term and long-term needs,” says Keith Greene, vice president of data center operations at Peak 10 (www.peak10.com). “Colocation, cloud, and managed services providers help companies to manage their capital and operational dollars to be the most efficient for their business.”

Before you can take advantage of colocation, there are a few things you need to know. With the help of experts, we’ll show you what to look for in a colocation provider so you lower your infrastructure costs and meet your company needs.

Understand the components of the colocation facility. Before you start looking at potential colocation providers, you should first research everything that goes into a colocation facility and how it will affect your company’s needs and overall costs. Colocation facilities comprise much of the same IT equipment as onsite data centers, including electrical distribution, chillers, computer room air conditioning, uninterruptible power supplies, and more, says Greg Elliott, director of business development at 1102 Grand (www.1102grand.com).

Elliott says that some companies can opt for public colocation data centers to take advantage of the aforementioned equipment, but still be able to maintain control of their data center equipment itself, which includes servers, routers, and more. In the end, it comes down to how much of its systems a company wants to put into colocation and how much should remain onsite.

Decide how much space and power your company needs. After the research phase, you should use the knowledge gathered to analyze how large of a space and how much power you’ll need to keep your equipment up and running. This will not only affect the overall performance of the colocation facility, but also affect the overall costs associated with it.

“There are a number of important considerations when choosing colocation space, including physical security, access, redundant infrastructure, power capacity per square foot, service provider flexibility in equipment hosting, and cost, to name

a few,” Greene says. “It is well worth the effort to calculate the maximum power draw under peak load for all of the equipment in consideration for colocation hosting beforehand, as well as understanding the need for redundant circuits.”

Know the costs associated with colocation. With a good idea of how much space and power you need, you can also start considering the costs associated with your needs. According to Elliott, many colocation providers, including 1102 Grand, “use a space component and power component to determine monthly pricing for most spaces.” Elliott adds that there will also generally be a one-time setup fee for space and connectivity. He recommends that companies make sure that all of these items are detailed in the quote and the contract or agreement so that companies know exactly what they’re paying for.

Look at a provider’s customer service and security offerings. Make sure you find out whether a colocation provider offers

24/7/365 customer service, so you know support will always be available when your company needs it. Look into a provider’s security systems, as well, because saving money on infrastructure is only viable if your crucial systems are properly protected. Look for providers that offer a layered security approach and give you access to your systems so you can monitor them at will.

Make sure there is room for expansion. One of the most important things to consider when choosing a colocation provider is whether the space you invest in has enough room for you to expand. Most companies expect business to grow over time, and it’s important that colocation facilities have the flexibility to grow along with you.

“Companies can look to colocation, cloud, and managed service providers to buy and grow infrastructure to meet their business demands,” Greene says. “Financial viability and a growth strategy are important to make sure your provider can handle future requirements.” **P**

BUYERS’ CHECKLIST

- ✓ Who owns the colocation facility?
- ✓ What are your short- and long-term plans for the facility?
- ✓ What options are in place for potential company growth and expansion?
- ✓ How much power and space do you need?
- ✓ Does the facility offer 24/7/365 customer service?

KEY TERMS

SAS 70.
Stands for Statement on Auditing Standards No. 70 and is one in a long line of SAS auditing standards. SAS 70 relates to service providers, such as colocation providers, and is used to audit service controls and operating performance.

Cabinets, cages, and suites.
Terms used to describe how much space a company needs for its colocation resources. Cabinets are for companies that only need a small amount of space, and suites, vaults, or rooms are required for larger-scale colocation needs.

pdusdirect.com



Robust, economical power distribution solutions shipped within 24hrs – just 4-clicks away!



-  **COST EFFECTIVE**
Buy at 10-20% below competing sites
-  **FAST SHIPPING**
Products ship within 24-hours
-  **EASY-TO-USE WEBSITE**
Transactions completed in 4-clicks
-  **INDUSTRIAL GRADE QUALITY**
Highest quality PDUs on the market

PDUs || direct

Tel +1.888.751.7387
Fax +1.775.284.2065
www.pdusdirect.com
sales@pdusdirect.com

Premium Quality PDUs without the Premium Price

HOLLYWOOD, FL • MAY 15-17, 2012
TUESDAY-THURSDAY

+BATTCON 2012 STAY ENERGIZED

16TH ANNUAL STATIONARY BATTERY CONFERENCE

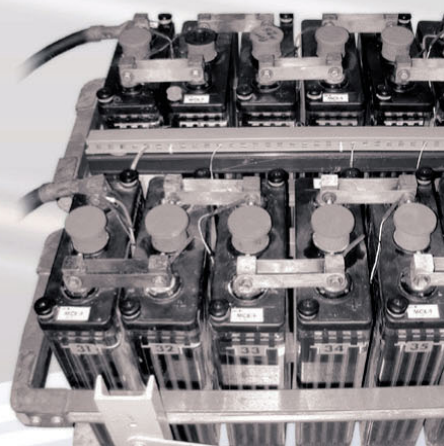
Learn about the latest
industry developments

Education and networking

Visit **trade show vendors** and attend **workshops**

Hear from leading authorities in
presentations and panels

"Both you and your company will benefit from attending Battcon!"



800-851-4632 • 954-623-6660

www.battcon.com

Jennifer.Stryker@alber.com

To be a presenter, see the Call for Papers page at www.battcon.com. Battcon always sells out. Register early!

Missed Your Favorite Trade Show?

Not To Worry . . .



Processor keeps you up to date with the newest products and latest technology information.



**Call (800) 334-7458
or go to www.Processor.com
to sign up for your free subscription today!**

PRODUCT SPOTLIGHT

Equipment Recycling & Disposal

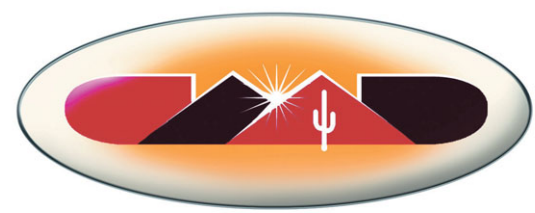
Company	5R Processors	AnythingIT	CloudBlue
			
Description	<p>5R Processors specializes in recycling and repurposing your enterprise's unwanted electronics. Services include computer and electronics recycling (including metal recycling), refurbishing, and waste processing of scrap material, all helping to reduce the negative impact of e-waste.</p> <ul style="list-style-type: none">• Closed-loop recycling used to create new products from destroyed and shredded equipment• Environmentally aware recycling with accountability for all hazardous waste, minimizing contamination• Accepts wide variety of equipment and components for recycling, including computers, mechanical equipment, utility and power equipment, various metals, and more• Meets R2 and ISO 14001 certifications <p>Best For: Enterprises looking to recycle or refurbish their end-of-life equipment.</p> <p>Contact: (715) 532-2050 www.5rprocessors.com</p>	<p>With a suite of IT asset management services, including testing, auditing, and DoD data destruction and processing, AnythingIT helps government and commercial clients deal with aging technology and the regulatory compliance issues involved with managing it. AnythingIT's consultants will perform an IT asset review and analysis that uses a fair-market evaluation of your current technology.</p> <ul style="list-style-type: none">• RecycleTomorrow® program saves costs in the remarketing and recycling process• Can process IT assets at multiple ISO 14001-certified facilities globally• Offers custom-designed channel and non-channel programs for OEMs and integrators servicing both government and commercial clients• Knowledgeable in disposal processing, data mining, and warehouse systems for IT assets• Unparalleled past performance servicing public-sector clients <p>Best For: Government and commercial enterprise organizations that need help making cost-effective business decisions for IT storage, disposal, resale, donations, and recycling.</p> <p>Contact: (877) 766-3050 www.anythingit.com</p>	<p>CloudBlue offers several e-waste management services for enterprises and consumers. Both onsite and offsite data eradication services can be provided using nationally and internationally recognized standards. Services available include refurbishment and repair, fair market value assessment, remarketing strategies, warranty support, repair services, and much more. Additionally, a dedicated program manager will assist with every operation.</p> <ul style="list-style-type: none">• A certified e-Stewards recycler• ISO 14001:2004 certified• Onsite services available to help manage, de-install, or redeploy IT assets• Qualified CloudBlue technicians available on location to ensure your assets and data remain secure• High-level repair services available• Safe and secure recycling methods meeting the highest of industry standards <p>Best For: Enterprises looking for a certified service provider to assist with the recycling, repair, or refurbishing of IT assets.</p> <p>Contact: (866) 437-4258 www.cloudblue.com</p>

Company	Secure MDE	U.S. Micro	WeBuyUsedTape.net
			
Description	<p>Secure MDE offers a guaranteed solution for end-of-life data. The Secure Shark high-capacity destruction service shreds media your company no longer needs—media that's full of sensitive data, takes up space, and causes you anxiety. Secure Shark can handle jobs of any size, anywhere in the country. Best of all, the process safeguards the environment by recycling 100% of all resultant material.</p> <ul style="list-style-type: none">• Cost-effective: Eliminates labor costs of wiping, disassembling, or degaussing• Secure: Onsite personnel can monitor the destruction process and verify the results• Convenient: All destruction takes place at your site; Secure MDE can handle quantities of any size• Environmentally friendly: Exceeds EPA, OSHA, state, and local environmental laws <p>Best For: Organizations of any size that want to responsibly, securely dispose of end-of-life media.</p> <p>Contact: (888) 312-2333 www.securemde.com</p>	<p>U.S. Micro offers data sanitization services and demanufacturing capabilities to companies that need to retire IT assets securely and responsibly. The company deploys its own technicians, rather than subcontractors, to destroy data onsite at customer locations, every time, anywhere in the United States. IT assets are tracked every step of the way by an industry-unique proprietary electronic tracking technology called Enertia. Using next-generation technology, U.S. Micro is able to demanufacture any IT asset that cannot be sold.</p> <ul style="list-style-type: none">• Data sanitization occurs at the customer's location• Enertia safely tracks and certifies when all devices are data-free• U.S. Micro technicians, not sub-contractors, handle every step of the process• All assets are refurbished and resold or recycled; demanufacturing occurs at U.S. Micro's next-generation facility and nothing ends up in landfills <p>Best For: Enterprises in need of secure, environmentally responsible IT asset disposition services.</p> <p>Contact: (888) 876-4276 www.usmicrocorp.com</p>	<p>WeBuyUsedTape.net pays top dollar for your new and used tapes. WeBuyUsedTape has been in the business of purchasing new, used, excess, and surplus magnetic media for more than 35 years. It uses regulation-approved, secure data eradication processes and environmentally friendly disposal programs to give organizations a safe and economic incentive for recycling used media. No-obligation, confidential quotes on your tape media are available at any time. Onsite data destruction available.</p> <ul style="list-style-type: none">• Simple process: Submit your list of media; receive a confidential, no-obligation offer within 24 hours; and ship your media to us.• Processes meet HIPAA, Gramm-Leach-Bliley, PCI, Sarbanes-Oxley, and other regulation requirements• Data Destruction Certificates document your transaction and provide proof of complying with recycling and data eradication processes <p>Best For: Enterprises needing a secure way to dispose of new, used, excess, and surplus magnetic media.</p> <p>Contact: (800) 821-1782 www.WeBuyUsedTape.net</p>

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

Services

DMD Systems Recovery



DMD Systems Recovery works to minimize your risk and maximize your payback, so you'll get a solid return on investment without worrying about the possibilities of regulatory fines, bad publicity, or litigation from data theft on hard drives that weren't properly sanitized. DMD Systems Recovery offers data deinstallation, packaging, logistics, data destruction, recycling, and remarketing.

- Removal and packaging services to preserve value
- Increased ROI through direct purchase or profit sharing
- DoD 5220.22-M-compliant data wipe and NAID-compliant destruction
- Reduced risk through certificates of destruction and compliance and transfer of ownership

Best For: Data centers, call centers, and companies with large centralized operations.

Contact: (877) 777-0651 | www.dmdsystems.com

Intechra



Intechra focuses on data security and protecting clients from liability by leveraging technology, processes, and customized solutions into the right mix of end-of-life asset management and disposal services. Intechra's IT asset disposition offers waste-free, worry-free service, covering all steps of the process, including logistics, data security, and the demanufacturing and recycling of materials.

- Ultimate data security protection
- Environmentally compliant disposal
- Comprehensive remarketing, redeployment, and donation strategies
- Full indemnity against risk

Best For: Enterprise or global organizations needing a secure, compliant global IT asset disposal strategy.

Contact: (800) 393-7627 | intechra.com

Reclamere



Reclamere's experienced team works with you to develop a data security plan tailored to meet your data destruction, data recovery, and IT asset management needs. Reclamere's experts can also help you execute your legal responsibilities for each phase of the IT equipment life cycle, which helps protect your company, employees, and clients from data breaches.

- Certified data destruction
- IT asset management for safe and secure preparation of electronic equipment
- IT audit and assessment to evaluate a company's risk level
- E-discovery and litigation support to recover information from hard drives for legal procedures

Best For: Enterprises most concerned about the security of outdated IT assets.

Contact: (814) 684-5505 | www.reclamere.com

Do you have a
NEW
PRODUCT
that data center/IT managers
would be interested in learning about?

Send your press release
or related product information to
press@processor.com.

BUYING TIPS:

Equipment Recycling Services



WHEN YOU WANT TO MAKE SURE your equipment is recycled safely and your stored data is completely erased, choosing the right equipment recycling service is essential. And according to Brian Musil, founder and director of sales and purchasing at Recycle Your Media (www.RecycleYourMedia.com), there is no way for companies to properly handle recycling themselves.

Equipment recycling helps the environment and can slow down the amount of materials unnecessarily ending up in landfills, says Norm Hutton, managing director of sales and acquisitions at DTC Computer Supplies (www.WeBuyUsedTape.net). And the biggest problem, according to Hutton, is that some of this e-waste is toxic.


The need to recycle your unused equipment is about much more than simply cutting costs. Musil notes that e-waste is still the fastest growing municipal waste stream in the United States. Recycling old or unused equipment can also help your company save money and make room for new equipment.

Given that, here's what to look for when choosing an equipment recycling service.

Accepted equipment and services provided. The first things you should look at are what services the recycling company provides and whether your equipment is accepted by the company for recycling. If you're looking to recycle used tape media or equipment, for example, make sure the service company you choose can handle the type of media you have. The same goes for other equipment such as computers and servers.

Different companies also provide different services. Most will pay you for equipment that can be reused or let you donate your proceeds to charity. Some equipment can't be reused, but you can still pay to have it recycled and receive data destruction reports or other documents showing that data was erased. The payment you receive or costs you incur will depend on what you are recycling, so be sure to contact the company to get a quote in advance.

The process. Recycling companies have different ways of getting rid of your IT equipment. Musil says that the first step is contacting one of the company's specialists who can help you decide whether you need onsite destruction or if you want to send equipment to the company for recycling. Most equipment recyclers are flexible and let you choose the easiest option for your individual needs. And if your company or one of your facilities is international, Hutton notes that you'll want to be sure the service provider can arrange and pay for shipping from anywhere in the world.

Check for transparency. You'll likely want as much transparency as possible, so you should make sure the recycling service you choose keeps a history of all the equipment it recycles. You can track your equipment from start to finish and know that your data hasn't been compromised. And as an added bonus, if you want to buy equipment from one of these companies, some of them can provide information showing when it was recycled and where it came from. 

BUYERS' CHECKLIST

- ✓ **Cost.** What is the total cost to recycle your equipment?
- ✓ **Compensation.** Will the service pay you to recycle the equipment?
- ✓ **Transparency.** Does the company let you track your equipment and provide proof of data destruction?
- ✓ **Competitive.** How does a company's price quote and service options compare to other alternatives?
- ✓ **Process.** Will the company pick up your equipment, or do you have to mail it to the company?
- ✓ **Extra features.** Does this company provide any extra services you can't get anywhere else?

KEY TERMS

- Data destruction report/certificate.**
A document proving that data has been safely and completely deleted from equipment you have submitted for recycling.
- Data eradication.**
The complete erasure of data from equipment, such as tapes and disk drives, so that no sensitive information is lost or stolen during the recycling process.
- E-waste (electronic waste).**
One of the biggest problems facing data centers and IT companies. It covers desktop computers, laptops, blade servers, and other larger infrastructure equipment that is thrown away without recycling.
- VOLSER (Volume Serial Number Report).**
A procedure some equipment recycling services use to track equipment from your company to the recycling facility.

Do you have excess equipment?


Post it for sale on Processor.com!

It's as easy as:

- On the Processor.com home page, click Used/Refurbished Equipment.
- Choose Post A Free For-Sale Listing.
- Follow the on-screen directions from there!

(800) 247-4880 | www.Processor.com





Information Technology Trading

Experience to find you the right technology solution.

AS/400 • RS/6000 • Sun Microsystems
Storage • Tape Backup

(877) 715-3686 | www.itechtrading.com

PEACE OF MIND

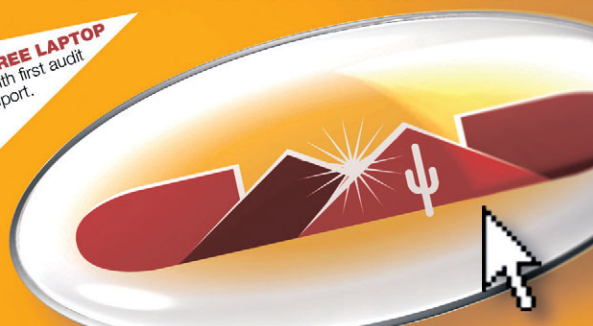
Secure data wiping and destruction

Certified equipment disposal, reuse and recycling.
Data security processes approved by DoD.

SOX, EPA, DOD, HIPAA, ISO14001 compliant (R2 pending).

FREE LAPTOP with first audit report.

processor@dmdsystems.com
602.307.0180



We Buy Used Cell Phones

& pay up to \$125 for each phone

Some phones have no value. See current purchase price list for individual model prices at www.pacebutler.com

Here's how to do it!

- Box cell phones
- Ship **FREE** (prepaid label online at www.pacebutler.com)
- We issue your check the next business day!

WE DONATE AN EDUCATIONAL BOOK! for EVERY cell phone sold to PaceButler

PaceButler since 1987 corporation

5915 NW 23rd St. Oklahoma City, OK 73127
www.pacebutler.com
1-800-248-5360 • (405) 755-3131





770-931-7732
Fax 770-931-9416
www.dbgweb.com
salesp@dbgweb.com

DEC-Compaq-Cisco-Sun-SGI

AlphaServer GS160 Model 16

Base System for OpenVMS

- DY-160CG-AA
- One Alpha 21264 Processor 1224 MHz
- Four Quad Building Blocks
- One 14-Slot PCI Shelf
- OpenVMS Operating System License

ALSO AVAILABLE:

- Additional 1224 MHz CPU w/SMP
- Additional Memory
- Additional PCI Shelves
- Additional PCI Options

2 SYSTEMS IN STOCK!

Authorized **COMPAQ** Reseller

WE WILL BUY YOUR USED HARDWARE!



We Know You're Busy

That's why we make sure each issue of *Processor* provides comprehensive information in a quick, easy-to-read format.

It's all available both in print and online at www.processor.com.

PROCESSOR

Call (800) 334-7458 to subscribe to *Processor* or go to www.processor.com to read articles and view thousands of products online free of charge to qualified readers.

Right Here!

All In A No-Nonsense Format

- Product Overviews
- Leading Manufacturers
- Technology News & Information

Don't Miss A Single Issue.

Call 800-334-7458 or go to www.processor.com



PRODUCT SPOTLIGHT


Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

UPSes

Product

Description

CyberPower Systems PFC Sinewave UPS Systems



The CyberPower CP1500PFCLCD PFC Sinewave UPS System with pure sine wave output and multifunction LCD safeguards computer systems, servers, and networking hardware that use conventional and Active PFC (Power Factor Correction) power supplies. Its AVR (automatic voltage regulation) topology delivers clean, consistent AC power, protecting connected equipment and preventing costly business interruptions. Its patented GreenPower UPS™ advanced circuitry reduces UPS energy costs by up to 75% compared to competitive models. The PFC Sinewave UPS Systems solve the critical compatibility issues of non-sine wave UPS products working with computing systems using Active PFC power supplies (ENERGY STAR 5.0).


- 1,500VA/900W pure sine wave UPS
- Line-interactive topology
- AVR & GreenPower UPS

Best For: Midrange to high-end computer systems, servers, and networking hardware that use conventional and Active PFC (Power Factor Correction) power supplies.

Price: \$259.95

Contact: (877) 297-6937 | www.cyberpowersystems.com

Rackmount Solutions Minuteman Endeavor UPS Battery Backup



Rackmount Solutions' Minuteman Endeavor series of UPS battery backup products delivers an online uninterruptible power supply in a form factor that can be rack-mounted, placed on the floor as a tower, or installed in a cabinet. With a power factor of 0.8 watts and available with capacities up to 3kVA, the Minuteman Endeavor series features hot-swappable batteries, rapid battery recharging, and extended runtime using external battery packs, and it's also RoHS-compliant. Outlet receptacle control for noncritical load shedding is included. The Endeavor series also includes Minuteman SentryPlus monitoring and control software and a front panel display with status indications.


- Simultaneous RS-232, USB, and SNMP communications
- Three-year warranty with up to \$200,000 equipment damage insurance
- Manual and automatic testing
- Harmonic distortion control
- Dedicated emergency power off port

Best For: Any situation where form factor flexibility is needed.

Price: Starts at \$546.75

Contact: (866) 207-6631 | www.rackmountsolutions.net

Rackmount Solutions Eaton Evolution S UPS Battery Backup



The high-density, line-interactive Eaton Evolution S UPS (1750 VA/3000 VA) is an ideal solution for protecting servers, network devices, storage systems, point-of-sale terminals and other sensitive electronic equipment. The Evolution S can be easily integrated into a wide variety of environments and can provide hours of battery runtime. And, with one of the best price/performance ratios, this UPS offers a low total cost of ownership.

- Line-interactive technology with sine wave output to ride through blackouts and brownouts without stressing the connected devices and high output to protect equipment with PFC power supplies
- Versatile rack/tower form factor available in high density 2U or 3U size
- Extended runtime capabilities with multiple, hot-swappable battery modules (optional)
- One USB port, one Serial/Contacts port and one card slot
- Remote reboot of locked equipment, sequential start-up

Best For: Any situation where form factor flexibility is needed.


Price: Starts at \$599

Contact: (866) 207-6631 | www.rackmountsolutions.net

Product

Description

Staco Energy Products FirstLine P 65-250kVA 480VAC UPS




Staco Energy Products has added 160, 200, and 250kVA 480VAC UPS models to its FirstLine P lineup. The company now offers three-phase UPSes for 65-250kVA applications. Up to 98% efficient, the devices use IGBT (insulated-gate bipolar transistor) and DSP (digital signal processor) control to produce true online double conversion with up to eight units in parallel for expandability and redundancy. FirstLine P boasts high efficiency and an impressive power factor, which translate into lower utility costs and a greener footprint. The units protect upstream power supply sources from harmonics and reactive power generated by the load.

- Dual Bus and Dynamic Dual Bus System configurations
- Hot-swappable
- Front, top, or bottom access for placing units against a wall
- Two-year onsite warranty
- Nationwide Service Program

Best For: Computer room and data center applications where affordability, efficiency, reliability, and flexibility are essential.

Contact: (866) 261-1191 | www.stacoenergy.com

Staco Energy Products FirstLine PL 10-100kVA 208VAC UPS




Staco Energy Products FirstLine PL UPS is a parallelable three-phase UPS meant for 10-100kVA applications. Up to four FirstLine PL units can be run in parallel, providing redundancy with no additional hardware. The units have efficiencies of up to 95% and feature a compact transformerless design that allows for internal batteries up to 30kVA. IGBT and digital signal processor control provides true online, double-conversion technology, while a user-friendly display boasts alarms and LED indicators for bypass, main line, battery powering the load, load on bypass, and normal output.

- Dynamic Dual Bus System configuration
- Space-efficient
- Matching extended battery and options cabinets
- Two-year onsite warranty
- Nationwide Service Program

Best For: Network closets, computer rooms, and small data center applications requiring a high level of available conditioned power.

Contact: (866) 261-1191 | www.stacoenergy.com

Staco Energy Products UniStar P Series 6-10kVA Rack & Tower UPS



Staco Energy Products UniStar P is an online, single-phase parallel redundant UPS available in 6kVA Rack/Universal and 6kVA, 8kVA, and 10kVA Tower models. The products are power- and runtime-scalable, up to 98% efficient, can be configured with up to four units in parallel, and are DSP-controlled. The units feature an LCD/LED mimic panel and easy-to-set user personalization, and they offer continuous power conditioning and smooth uninterrupted switching from utility to battery, handling wide fluctuations without going to battery. The units also have a very low rate of added harmonics, which protects system integrity.

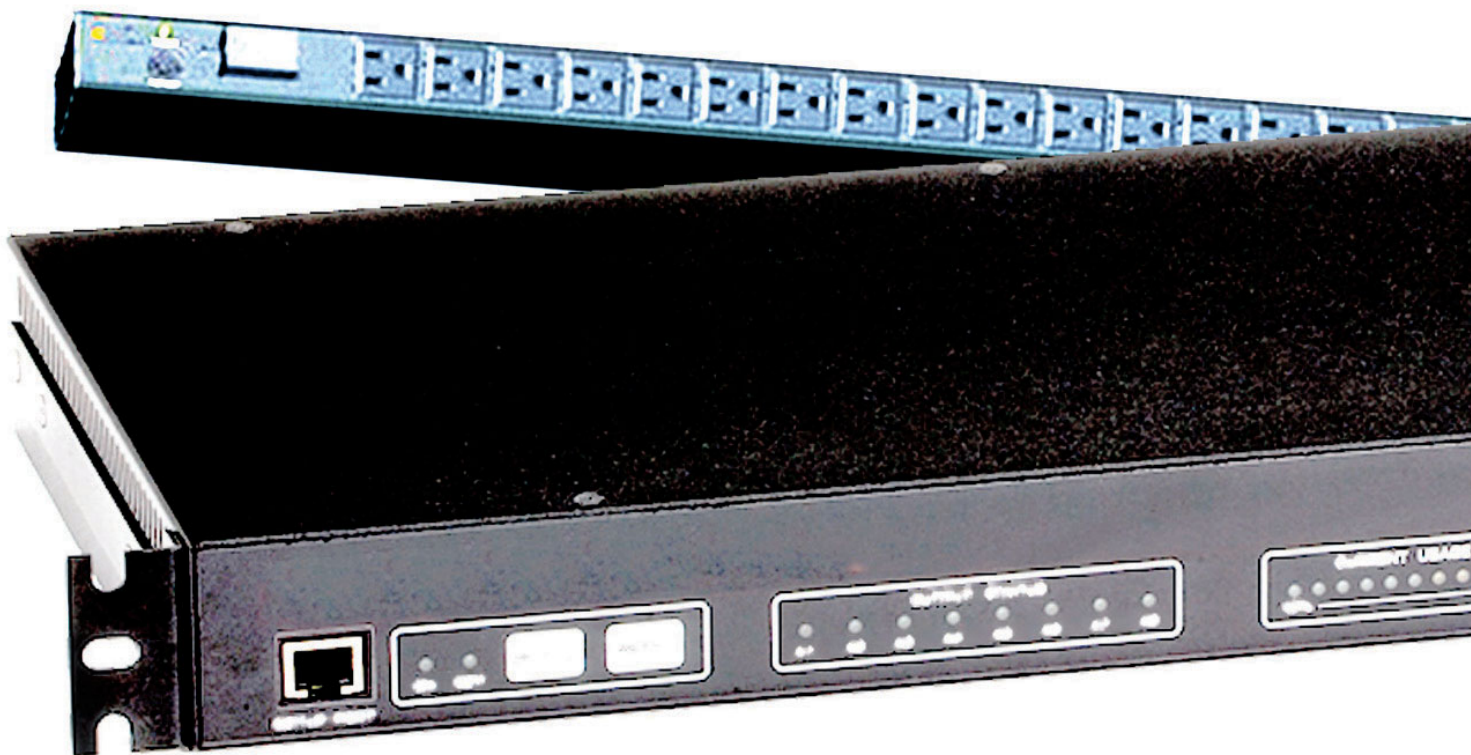
- High input power factor and low current THD
- Flexible Rack/Universal and Tower models
- RS-232 port and optional communications slots
- Hot-swappable battery and matching external battery pack
- Industry-leading three-year warranty
- Nationwide Service Program

Best For: Network closets and small computer rooms requiring a high level of continuous available conditioned power.

Contact: (866) 261-1191 | www.stacoenergy.com

BUYING TIPS:

UPSes



ULTIMATELY, the primary question IT should ask when buying UPSes is what level of protection is needed, says Brett Femrite, director of business development at Rackmount Solutions (www.rackmountsolutions.net). “A basic surge protector/suppressor will go a long way to protect your equipment from power spikes and surges, but in the case of power outages, you need to look at a UPS,” he says. To that end, consider the following buying tips.

Top features to consider.

Beyond a high efficiency rating (95% or greater), James Hall, marketing manager at Staco Energy Products (www.stacoenergy.com), says UPS systems should offer a high input power factor (greater than 99%), low input distortion (3% or less), easy installation and accessibility, and an external maintenance bypass switch. Other notable features include high-performance filtering to protect upstream power sources and dual inputs for the main and secondary emergency standby power. Hall advises to select a UPS that has sufficient capacity to handle the IT loads, adding that UPSes exceeding their capacities is one of the highest causes of data center downtime.

Capacity-wise, Femrite advises to purchase a unit that exceeds your total power requirement by 20 to 30%. “This not only ensures capacity coverage but will also allow some room for growth if/when you add additional pieces of equipment,” he says. Where runtime is concerned, Femrite says, “It can be a great cost savings down the road if you factor in future expansion and buy a UPS that offers the ability to upgrade or add additional batteries if/when needed.”

UPS types. The three primary UPS categories include standby, line-interactive, and online models, Femrite says, with different iterations existing within each category. Standby systems run power through surge suppression to the equipment; if there’s a power outage, the UPS switches to battery backup power, reverting back to AC power when

power returns. Line-interactive systems have built-in line-sensing abilities to regulate high or low voltage levels. An inverter switches on if there’s a power loss, and the system switches to battery power. Online systems provide the highest protection level, Femrite says, as the inverter is online and operates continually to eliminate incoming surges and low

and high voltage issues while delivering clean power to equipment.

Data center-grade features. For data center use, Hall says three-phase online double conversion (converts AC power to DC and then back to AC) systems offer the greatest value while also providing conditioned power to IT loads. “These UPS systems totally isolate the load from the primary AC line,” he says. “Noise, sags, and swells never reach the load.” Overall, Hall says obtaining the lowest TCO should be a primary objective. “This includes battery and other auxiliary hardware,” he says. He advises to determine what the cost to acquire, operate, and maintain equipment will be over the equipment’s lifetime. Additionally, key factors include high sustainability, space efficiency, ease of installation, integration with existing systems, scalability, and high reliability.

Size matters. In terms of data center-grade UPSes, Femrite cautions one size doesn’t fit all. “It’s more about design and configuration than type,” he says. Budget, kW/MW capacity, availability requirements, and risk tolerance are other factors, as is recognizing that as the configuration gets higher on the availability/dependability scale, the associated costs also increase. “Redundancy, system efficiency, distributed architecture, maintenance, and fault tolerance (eliminating single points of failure) are all key considerations when evaluating data center-grade UPS solutions,” Femrite says. Hall adds that SMEs should take transient loads into account when determining ideal UPS size.

Batteries. When factoring in batteries, Femrite says, “the solution you select should be able to notify you of any issues with battery performance or maintenance needs.” Hall points out that battery life will degrade with age, even if they don’t encounter lots of discharge cycles. Thus, if your minimum runtime requirements are critical, “the battery should be selected to provide some cushion so that after several years, minimum runtimes can still be achieved,” Hall says. ■

BUYERS’ CHECKLIST

- ✓ What type of UPS system do you need?
- ✓ Is the UPS sized to properly handle the loads required?
- ✓ Are the necessary monitoring and management tools provided?
- ✓ Does the UPS offer sufficient runtime and capacity?
- ✓ Is the UPS backed by insurance or a guarantee?

KEY TERMS

Capacity:

The maximum amount of power a UPS can handle.

IGBT and DSP:

Short for insulate-gate bipolar transistors and digital signal processors, respectively, these components provide for true online double conversion in UPS systems.

Runtime:

The length of time a UPS will continue providing backup power in event of a power outage.

Determine The Best Backup Plan For Your Enterprise

Data Security & Future Growth Are Among The Biggest Concerns

DETERMINING THE BEST backup solution for the enterprise and implementing it requires IT to address numerous issues, including those concerning how the solution will hold up in the future. Essentially, says Jason Buffington, Enterprise Strategy Group analyst, the future consists of “this year and next year and likely the one after that.” During that time, however, it’s possible the enterprise could outgrow the backup solution if business prospers and must evolve to meet growing needs, Buffington says. So, how best plan for future backup needs? One way, Buffington says, is asking vendors how they’d change their products and solutions now to meet two times, five times, and 10 times more data, “which arguably are only one, two, and potentially three years away, respectively.” For more on selecting an appropriate backup solution, read on.

Getting Started

According to John Pearring, sales manager at STORServer (www.storserver.com), the first step toward the best backup choice is determining exactly what the enterprise’s backup needs are. This requires knowing which data must be protected and how to protect it, when, and for how long. Doing so can include contemplating RTO (recovery time objective), or how quickly certain data must be made available or restored, and RPO (recovery point objective), or from what point in time the enterprise must restore data. “The restore requirements are the most important issues,” Pearring says. “Backup plans are important, but the fulcrum for decision-making begins with restore.”

Another focal point for IT should be determining which backup solutions are reasonable. For example, says Greg Schulz, Server and StorageIO senior advisory consultant, a Band-Aid approach that buys the enterprise time until it can modernize data protection for the long haul might be appropriate. Schulz advises to step back from comparing tools and technologies initially and instead review service-level objectives and requirements, including RTO and RPO. “Also, review data access and usage patterns, as well as identify data that is a candidate for archiving from databases, email, and file systems,” Schulz says. Reducing the enterprise’s data footprint impact at the source using archiving for inactive data with real-time compression and deduplication can also minimize the impact of data protection, Schulz says.

Prepare For Obstacles

Beyond addressing cost, growth, available resources, and staffing issues, Schulz says, a bigger obstacle for IT can be having to rethink how it has protected and

stored data previously. This may require stepping back from older technologies, he says, and looking at modernizing data protection vs. simply swapping out media, such as disks for tapes. Schulz advises to “find and fix problems, enable scale, [and] reduce complexity and cost while supporting growth.”

Another potential obstacle relates to research, something Pearring says usually dominates a large part of the process and which can include “comparisons, meetings, and affirming the marketing language and sales pitches actually do what they say they’ll do.” Comparing pricing, installation/implementation, training, and support options can also eat up time, he says, but these things all have to be done. Overall, Pearring suggests making certain

any staff members with a stake in the backup solution are able to review the solutions under consideration. “Adoption of a plan that staff haven’t all reviewed can be both awkward and difficult,” he says.

Buffington says that although a good data protection implementation can become transparent once deployed, implementing a plan “may take some expertise that’s not in-house for most SMEs.” Acquiring guidance is absolutely worth

Get Started

Selecting and implementing a backup solution can entail using metrics, measurements, and management tools that offer insight into the current backup solution and the data itself, including how it’s being used and how often it changes and is accessed. Reviewing RTO and RPO numbers, protection frequency, and retention cycles may be warranted. Ultimately, using a data footprint reduction approach, upgrading media, or using a cloud-based option may make the most sense.

Enterprise Strategy Group analyst Jason Buffington says the best tool IT can use is an outside integrator, “preferably someone who helped you deploy or maintain your existing infrastructure.” While weighing solution options, he says, “consider any single vendor-created content with a grain of salt. I promise that their literature and Web info will make their stuff look exactly like what you need. Instead, consider a multivendor expert, perhaps an analyst or an info-sharing portal.”

Top Tips

- ✓ **Allow for adjustments.** When moving to a new backup solution, staff may need time to adjust. According to John Pearring, sales manager at STORServer (www.storserver.com), “Traditional backup solutions often force a company to act within the limitations of legacy backup operations.” After a new solution is implemented, often those familiar with the legacy solution will create speed bumps to progress. “The reasons vary from simply doing things differently to actually eliminating mundane tasks that they’ve gotten used to doing,” he says.
- ✓ **Spend what’s needed.** According to Jason Buffington, analyst with Enterprise Strategy Group, “While everyone wants to spend pennies to save dollars, real data protection may cost dimes, not pennies—but you’ll still be saving dollars,” he says. Often, management may underestimate the financial impact downtime or lost data has until it’s too late, he says. “In today’s market, that may mean losing a key client or potentially being unable keep the doors open just because you can’t get your data back,” Buffington says.
- ✓ **Don’t assume.** Buffington says one obstacle SMEs may encounter is assuming it must match the protection levels of large enterprises. “Don’t overestimate what you need or sticker-shock will kill you,” he says. Conversely, he adds, “Don’t underestimate, or you won’t be able to recover. Understand what you need and it will ‘fit’ financially. Just be sure that you have the right tailor so the ‘fit’ is correct.”

Key Points

- A necessary step in deciding the best backup solution for the enterprise is determining what the enterprise’s requirements are for restoring data.
- Enterprises must decide what type of backup solution makes sense for the business, whether it’s a completely new solution or upgrading an existing one.
- Involve any IT responsible for the operation of the backup solution currently in place in the process for selecting a new or upgrade solution.

the money, he says, to help pinpoint those protection/resilience abilities already built into the SME’s current platforms and apps and decide what to do with data recovery goals. “Do it right at the beginning so that you can get back to the business that you really want to be focused on, and not on IT,” Buffington says.

Make A Seamless Transition

Selecting a specific backup approach can come down to something as simple as deciding what has to change with what you’re currently doing and what can stay the same. “Replacing existing backup solutions doesn’t need to be a total chaos-inducing shift,” Pearring says. “Plan for making changes that must be made and for keeping what works either the same or easily transferable. The impact on the company with a new data protection solution should not be so overwhelming that the company can be paralyzed. The solution you’re buying may indeed be a ‘rip and replace’ purchase, but it should be as seamless as possible.”

One thing to remember, Buffington says, is that your infrastructure is not that unique. In other words, hundreds of other companies have probably already addressed and overcome challenges identical or similar, meaning information is typically easily accessible. Additionally, using an outside expert to help bring the plan into being can ease the burden on IT, as can using a cloud-based service, which Buffington says can greatly save on the time IT devotes to backups. **P**



Action Plan

- Assess the current data environment.
- Determine the key platforms that need protection.
- Pinpoint areas where the business is exposed.
- Analyze how lost data or productivity would impact the business.
- Review RTO and RPO requirements.
- Identify alternatives to what’s currently being used.
- Involve staff responsible for the current plan to review potential new solutions.
- Implement the backup tools and technologies best suited for business.
- Analyze and make adjustments where necessary.

Conduct An IT Audit

Make Sure Your Infrastructure Works Exactly As It Should

YOUR INFRASTRUCTURE and the assorted products and services that make up your data center are not simply set it and forget it. Taking this approach could result in not getting the best performance out of the technology and opening the door for bigger problems in the future. In some cases, you'll need more than an internal monitoring solution to make sure your infrastructure is working as it should. For that, you can conduct your own IT audit or take advantage of the services of independent auditing firms.

The goal of an IT audit is to assess your infrastructure and the controls you have in place to monitor them. Once completed, an audit can tell you if these systems are working correctly or if work needs to be done. IT audits are important because technology is involved in almost every business process. In fact, the revenue stream of some companies "could be based on IT technology and has to operate the way you think it should and in a cost-effective matter," says Dave Brand, managing director at Protiviti (www.protiviti.com).

Here is a walkthrough of the IT audit process from beginning to end that shows how it can help your business in the long run.

Pre-Audit & Early In The Process

Before you even contact an outside auditor, you should have an adequate monitoring system in place to track the performance of your infrastructure. "A mix of independent auditing and non-independent monitoring are both important," says Ed McMurray, security and compliance consultant at CoNetrix (www.conetrix.com). "The monitoring can be done by someone in the IT department, because they can keep a close eye on it." Having such a system in place will make the audit process as painless as possible and give the auditor a great place to start when evaluating your data center.

With this information, you can formulate a risk-based list of systems that need to be audited. These can range from security solutions and applications to basic end-user support. This list will also help you decide what type of audit will work best for you. For instance, you can conduct a full audit for a majority of your IT products or you can break it down into smaller segments for faster auditing.

"A full IT audit will cover technical vulnerabilities, like patches being installed in a timely matter or logs being reviewed regularly all the way up to policies, procedures, and business continuity plans," McMurray says. "Or you can have a penetration test only, which is an external assessment of your Internet exposure related to social engineering, telephones, and more."

During The Audit & Afterward

The actual audit process is straightforward. There may be an onsite visit prior to the actual audit where the two

sides can work together to formulate an action plan that schedules out the audit steps and when they should take place. From there, an external auditing firm

Action Plan

- Before the audit process begins, you should have a system in place to monitor your infrastructure and make sure you can track its performance.
- Conduct a risk assessment of your data center and create a list of infrastructure and systems ranked from highest risk to lowest risk. This will help you decide which parts of your data center to audit.
- Sit down with your IT department, including management, and the auditor in order to formulate an audit plan. Decide which systems to audit, when to audit them, and what your expectations are based on your already gathered performance data.
- Run an audit of the highest-risk systems to ensure they are working correctly.
- After the audit, go over the report and assess potential areas of weakness. Then, put a plan in place to optimize your infrastructure in order to get the performance you expect.
- You may want to run another audit at a later date to ensure that the changes you make to your infrastructure are having the desired effect.

Get Started

According to Dave Brand, managing director at Protiviti (www.protiviti.com), the two most important things you can do to get started are to have a solid system in place to monitor controls and to know the highest risk infrastructure in your data center. "Understand the risks associated with what it is you own and understand the controls you have in place," Brand says. "Then, ask the auditor if all of the great things you're doing are working like they're supposed to."

Key Points


- Know the inherent risks of your infrastructure and have a way to monitor it to make sure performance is living up to expectations.
- Understand the auditing process and what the role of the IT department is within that process. Work in tandem with the auditor and don't be afraid to ask questions about how to improve throughout.
- Consider either a rotation- or risk-based approach to auditing, so you can make sure your systems are always running at the highest level and new issues don't crop up.

will send an auditor to conduct tests and assess only the infrastructure that you wish to audit. The auditor will also assess your monitoring solutions to ensure they are working as they should. After the audit, you'll find out whether your company's systems are meeting expectations.

Brand says that as long as you have monitoring systems in place prior to the audit, the "IT and data center manager doesn't have to do much." But he also stresses that there should be cooperation between the management or audit committee within the company, the IT department, and the auditor throughout the process to ensure that the company understands what the auditor found and what needs to be done.

And if after the audit and subsequent fixes a certain technology is still coming up high-risk, Brand says that companies shouldn't hesitate to perform another audit until the problem is solved.

Build An Audit Schedule For The Future

Always keep in mind that audits are tools for your company to improve performance and make sure your technology is working efficiently. For that reason, you should come up with a schedule of when to complete audits and constantly update your risk-based list of infrastructure. According to Brand, there's a possibility that systems you perceived as low risk at the beginning could "become more prevalent on the risk ladder" as time goes on, so it's important to stay up-to-date and regularly monitor the performance of your data center technology. 

Top Tips

- ✓ Ed McMurray, security and compliance consultant at CoNetrix (www.conetrix.com), says that even if your company isn't in the most common industries for audits, such as regulative or banking, it's still important to consider auditing your IT systems. "You can find a good audit firm that can work with SMBs at a reasonable price that will come in and do a wide range of IT audits to give you a better perspective," McMurray says.
- ✓ Don't forget to audit business continuity controls, including disaster recovery, because if all else fails, those are the systems that will save you from data loss and extensive downtime.
- ✓ There are a variety of audits available and many are customizable for individual companies. Conduct research and find the audits that will work best for your specific environment.



Decide Between In-House Or Hosted VoIP

Compare Upfront Costs, Unique Benefits & More Before Diving In

ON-PREMISES VoIP SYSTEMS have been around for quite some time, but with the increase of cloud-based technology offerings, managed and hosted VoIP solutions are becoming viable alternatives. Self-managed on-premises systems give companies full control but often have a higher upfront cost, while managed on-premises or hosted systems often have a lower cost but give businesses much less managerial control.

Choosing one of these solutions can be difficult. But if you look at your infrastructure capabilities, compare costs, and weigh the pros and cons of each system, you should be able to find a VoIP solution that will meet your needs without exceeding your budget.

Analyze Your Infrastructure

Before you start examining the unique features of on-premises, self-managed VoIP or hosted VoIP solutions, you should look at the capabilities of your existing infrastructure, including your network bandwidth and cabling. According to Brett Femrite, director of business development at Rackmount Solutions (www.rackmountsolutions.net), you have to ask yourself, “Do I have the appropriate cabling infrastructure in place to support the VoIP solutions? Are there dual CAT 5 drops to each workstation, or am I having to daisy-chain my workstation PCs into the phone and the VoIP into the jack?” Depending on your answers, your infrastructure might not even be able to support in-house VoIP, which will limit your choices.

On top of infrastructure, you also have to analyze your workforce. You may have employees that are familiar with using VoIP solutions but don’t have the expertise to manage them. If this is the case, you would have to hire new employees or bring in an outside expert to train members of your IT department, which all adds to the upfront costs related to setting up an on-premises, self-managed VoIP system.

Compare The Costs

As with any major IT-related purchase, you have to consider the overall cost and what functionality you will receive for the price you pay. “With an in-house solution, you typically will have more upfront acquisition costs, but more control over your system for moves, additions, and changes,” Femrite says. “With a hosted solution, be sure to carefully examine the agreement and its response times for both standard charges and emergency situations, such as system outages.”

Femrite says there are many financial factors related to choosing a VoIP

solution that go beyond the cost of hardware, software, or hosted pricing. He recommends looking at the accounting aspects and tax advantages of each type of system and to calculate the total cost of ownership related to each type of VoIP solution. “A fixed monthly operating cost for a hosted solution can be desirable,” he says. “But the TCO over the life span of the system could in fact be less with an on-premises VoIP system.”

Upgrade Or Make The Move

Some companies may already have an on-premises VoIP system in place but are looking at either upgrading it or switching to a hosted alternative. There are a few

signs that it may be time to upgrade, including failing equipment, expensive maintenance, or staff complaints about the current low-tech offering, says Daniel O’Connell, research director for the Enterprise Service group at Gartner. Depending on the state of your infrastructure and current VoIP solution, a simple upgrade may be enough to meet your changing VoIP needs.

In some cases, however, it may be more cost-effective to switch over to a hosted solution that can provide faster speeds and better overall performance at a lower price. O’Connell says that hosted solutions may be more beneficial for SMEs or highly distributed businesses that have difficulty managing an in-house VoIP system. Instead of spending money upgrading your

Key Points

- Look at your infrastructure capabilities and make sure you are even in a position to manage a VoIP solution. If you already have one in place, decide whether to upgrade it or move to a third-party alternative.
- Compare the total cost of ownership of in-house, managed, or hosted VoIP systems and consider the long-term and short-term costs of each option.
- If you choose a third-party VoIP solution, choose wisely between an on-premises managed solution and a fully hosted one. Determine how much control you want over the system.

Action Plan

The following steps were provided by James McCloskey, senior research analyst at Info-Tech Research.

- Inventory your existing telecom services, including circuits, users, functionality, capacity, and workload.
- Understand near-term and future growth needs in terms of users, advanced features, and related capabilities, such as unified communication, videoconferencing, or mobility.
- Identify your options. This includes upgrading or extending your current system, replacing it with a new on-premises or managed system, or moving to a fully hosted version.
- Understand the capabilities and lifecycle costs associated with the various options.
- Make your selection and implement it, taking great care to ensure it is flexible enough to keep up with your company’s changing needs.

Get Started


Look at the size of your company and the number of employees that will need to access the VoIP solution. If your company has fewer than 250 employees, you may be able to put an on-premises VoIP system in place that will perform well and be easy to manage. However, if your company has more than 250 employees or is spread out over multiple satellite offices, then allowing a third-party provider to manage every facet of your enterprise’s VoIP system may be a less expensive alternative as well as a headache reliever for your IT department.

existing systems or hiring more personnel, you can pass the management responsibilities on to a third-party vendor and focus on using the system, instead of controlling and managing it.

Managed On-Premises vs. Hosted

If in the end you decide that a third-party managed solution is the answer to your problems, you then have to decide between a managed on-premises approach and a hosted alternative. With managed on-premises VoIP solutions, you are responsible for purchasing or leasing hardware and software for the VoIP solution and implementing it. The service provider is simply responsible for managing your VoIP solution and helping with any issues along the way.

With a hosted solution, you still have phones and other communication tools onsite, but the actual network connection and VoIP system are managed and hosted by the third-party vendor. In the short term, hosted VoIP is one of the least expensive and most adaptable choices, because “capital expenditures are minimized and subscription pricing provides substantial flexibility for adding or changing services,” says James McCloskey, senior research analyst at Info-Tech Research.

Both of these options will counteract the need for in-house personnel with VoIP management experience and help lower the costs associated with implementing a VoIP solution, whether it be through leasing or hosting. In the end, it depends on how much control your company wants over the system and determining whether a fully hosted solution would better fit the needs of the organization. 

Top Tips

- ✓ Make sure a third-party VoIP vendor fully meets the current needs of your company as well as any that might arise in the future. Have a good idea of what direction your business is going and how quickly. This will help you choose a VoIP solution that is flexible enough for your company and has all the necessary features.
- ✓ Know the strengths of your workforce. Build a cost-benefit analysis of whether it’s worth it to train employees on how to manage a VoIP solution. If not, a managed or hosted VoIP system may be a better alternative.
- ✓ Consider system availability. With an in-house, self-managed VoIP system, you have more control over uptime and downtime. If a third-party vendor has an outage, no matter how large or small, it could negatively affect the productivity of your employees.



Diagnose Server Performance Problems

Read The Signs To Determine What’s Causing Trouble In Your Data Center

SERVER LAG FRUSTRATES EVERYONE—your end users waiting for a Microsoft PowerPoint file to open, your C-level executives who want their email pushed to them instantaneously, and you, the data center manager who must listen to and solve these complaints.

In today’s increasingly virtualized world, server performance problems are more common and problematic than ever before. “In a physical environment, each server had its own SCSI controller, disks, memory, CPU, and so forth,” says Erwin Vollering, virtualization service director at consultancy GlassHouse Technologies (www.glasshouse.com). “Now you’re running 10 to 15 servers in a shared environment on your physical host [that] are doing the same thing at the same time, using the same resources, and everything comes crashing down.”

So how do you go about diagnosing these difficulties so that you can solve them and move on? Here are some tips to get you started.

✓ **Make Sure It’s The Server**

Many performance problems that seem server-based oftentimes are caused by issues at the network, database, and storage tiers, says Jesse Rothstein, CEO and founder of ExtraHop (www.extrahop.com). “Ultimately, you need to look for these problems in a holistic, end-to-end manner, although the distinction can be tricky,” Rothstein says.

“If there is a delay happening, we want to see if the delay is occurring in the server first or if it’s happening out with the network or with the client,” says Dan Klimke, global product marketing manager at Fluke Networks (www.flukenetworks.com). “A lot of time is wasted chasing symptoms.”

Oftentimes multiple servers are linked together to deliver, say, an application to an end user. “You could have a Web-based front-end server that is talking to an application server that’s talking to a database server, and all of these are linked together over a network of some sort,” Klimke says. “So in troubleshooting, a first step is to ensure the problem is with the server, as opposed to being in the network.”

✓ **Fix Your Chatty Apps**

It’s entirely possible that an application is causing your server to lag or hang up. “An application can be excessively ‘chatty,’ meaning that instead of using large frames that encompass using a large amount of data and sending a fewer number of those, they are written to use minimum-sized frames, so they end up having to send back and forth a lot of traffic to get accomplished what larger frame sizes would accomplish much faster and more efficiently,” Klimke says.

For example, a command from an application may have gone into the server that sent the server into no-man’s land. “Look at the actual traffic that went into the server

to find out at what point the packet went in and what command went into the server before it hung up,” Klimke says. “That would necessitate having to look at actual traffic along the wire and being able to decode the command and the frame that went in just before that server hung up.”

✓ **Clean Up Dirty Networks**

Dirty networks—ones that drop, reorder, or fragment packets—can slow down a server’s performance, which can cause decreased server performance and increased server load, Rothstein says.

“Most people don’t realize that the network protocol stacks like the TCP stacks have a fast path and a slow path. The fast path is efficient and optimized for the packets it expects, the in-order delivery of the next packet,” he explains. “But when you have out-of-order delivery or [inadvertently go] down from the L4 layer to the L3 layer, the servers and operating systems will spend a lot more resources reassembling those IP fragments or reordering and reassembling the TCP segments.”

Virtualization can complicate this problem. “Your hypervisor is a scheduler . . . sharing CPU time across all of the different VMs and guest OSes that are running, and things can get delayed when it is switching from one to the other,” Rothstein says. “If the provisioning is wrong, network packets can be delayed to the point where they’re lost by the underlying network stack, and once you reach a tipping point, the performance degradation isn’t just noticeable. It’s catastrophic.”

✓ **Use Your Monitoring Tools**

Whether it’s an automated third-party tool that performs SNMP polling to record your server’s health metrics or a simpler free open-source tool, leverage your monitoring tools, Rothstein says.

Monitoring tools are especially important if you’re using virtualized servers, says Vollering. He says that all three major virtualization providers—VMware, Microsoft, and Citrix—offer good monitoring tools. “They’ll tell you what is stressing your environment, whether it is CPUs, memory, or disk utilization,” he says.

Even though those tools are available and in place, too often companies either don’t know they have them available or don’t know how to use them, Vollering says. Moreover, these tools can flood you with information and alerts. “You could spend the whole day going through graphs or charts,” he says.

So what’s the best way to leverage these tools? “Read through the manuals and configure [the tools] properly for your environment,” Vollering says. “That way, if there’s an alert, you know it needs to be explored, as opposed to being flooded by alerts because it’s still configured with the default thresholds.” ■

Best Tip:

✓ *Check Your Server’s Physical Resources*

Once you have pinpointed a performance problem as being server-based, you want to check out the physical resources in the offending server, says Kelly Sather, inside solutions architect at CDW (www.cdw.com). “The best case scenario is as simple as needing to add another processor or more memory,” he says.

“Check to see if your CPU utilization [is being] overwhelmed by processes,” adds Dan Klimke, global product marketing manager at Fluke Networks (www.flukenetworks.com). “We see lots of problems crop up just because disks get full.”

Most Common-Sense Tip:

✓ *Make Sure Servers Are Up To The Task*

Just because your hardware has made the compatibility list for a new or upgraded application doesn’t mean it will run properly, Sather says. “The resources in your server need to be commensurate with the load it’s going to have,” he says. “People moving to Exchange 2010, for example, are coming off older versions of Exchange that ran fine on their dual-processor, quad-core system with 24GB RAM. But because [Exchange 2010] is more resource-intensive, they see after the fact it’s not going to run on the old hardware.”

BONUS TIPS:

✓ *Calibrate and adjust your loads.*

Multiple virtual servers can bring about loads far beyond what physical servers can handle. “Know your limitations. If you do a snapshot at the same time you’re running your monthly financial consolidation numbers, your storage won’t be able to handle all those transactions simultaneously,” says Erwin Vollering, virtualization service director at consultancy GlassHouse Technologies.

✓ *Live migrate virtual machines.*

As workloads increase and VMs proliferate, you may find moving a problem-causing VM onto another host or offload “good” VMs onto another host to free up resources to VMs that need them, says Kelly Sather, inside solutions architect at CDW (www.cdw.com). Both VMware’s vMotion and Microsoft’s Hyper-V, among others, let you live-migrate VMs to other hosts without any connectivity to the end user.



Network With Your Peers At These IT Training & Association Meetings Across The United States

APRIL

AITP Pittsburgh

April 9, 5 to 8 p.m.
Silvioni's Restaurant
2125 Babcock Blvd.
Pittsburgh, Pa.
www.aitp-pgh.org

**AITP Wheeling-
Wheeling Hospital
New Tower 5 Tour**

April 11
Wheeling Hospital
1 Medical Park
Wheeling, W.Va.
aitp-wheeling.org

AITP Washington, D.C.

April 12
Alfio's La Trattorio Restaurant
4515 Willard Ave.
Chevy Chase, Md.
www.aitpdc.org

AITP Atlanta

April 19, 5:30 to 8 p.m.
Crowne Plaza Ravinia
4355 Ashford Dunwoody Road
Atlanta, Ga.
www.aitpatlanta.org

ISACA Kentuckiana

April 20, 11:30 a.m.
Louisville, Ky.
www.isacaky.org

ISSA Middle Tennessee

April 20, 10:30 a.m. to 1 p.m.
midtn.issa.org

AITP Akron

April 24
Akron, Ohio
www.akron-aitp.org

SharePoint Designer

April 24, 1:30 to 2:30 p.m.
New Horizons South Dakota
4610 Technopolis Drive, Suite 100
Sioux Falls, S.D.
register.nhcomputerlearning.com/Events/

ISSA Baltimore

April 25
Sparta Inc.
7110 Samuel Morse Drive
2nd Floor
Columbia, Md.
www.issa-balt.org

**ISSA
Metro Atlanta**

April 26
Atlanta, Ga.
www.gaissa.org

**VMware View:
Install, Configure, Manage
(v 5.0)**

April 30-May 5
The Arden Center
4675 Cornell Road, Suite 175
Blue Ash, Ohio
www.ardentraining.com

MAY

**Region 5 Spring Technology
and Networking Conference**

May 1-2
Holiday Inn Rolling Meadows
3405 Algonquin Road
Rolling Meadows, Ill.
www.aitpchicago.com

SpecTECHular 2012

May 3
New Horizons Austin
300 Highland Mall Blvd., Suite 100
Austin, Texas
register.nhcomputerlearning.com/Events/

Interop

May 6-10
Mandalay Bay Convention Center
Las Vegas, Nev.
www.interop.com

AITP Washington, D.C.

May 10
Alfio's La Trattorio Restaurant
4515 Willard Ave.
Chevy Chase, Md.
www.aitpdc.org

AITP Pittsburgh

May 14, 5 to 8 p.m.
Silvioni's Restaurant
2125 Babcock Blvd.
Pittsburgh, Pa.
www.aitp-pgh.org

SpecTECHular 2012

May 15
New Horizons Houston
5120 Woodway Drive, Suite 200
Houston, Texas
register.nhcomputerlearning.com/Events/

**ISSA Los Angeles 4th Annual
Information Security Summit**

May 16
Universal Hilton
555 Universal Hollywood Drive
Universal City, Calif.
www.issala.org/events/?event_id=16

Android DevCon III

May 17
Hyatt Regency Burlingame
1333 Bayshore Highway
Burlingame, Calif.
www.andevcon.com

AITP Atlanta

May 17, 5:30 to 8 p.m.
Crowne Plaza Ravinia
4355 Ashford Dunwoody Road
Atlanta, Ga.
www.aitpatlanta.org

AITP Akron

May 22
Akron, Ohio
www.akron-aitp.org

Exchange 2010

May 22, 10 a.m. to noon
New Horizons South Dakota
4610 Technopolis Drive, Suite 100
Sioux Falls, S.D.
register.nhcomputerlearning.com/Events/

SpecTECHular 2012

May 22
New Horizons Colorado
10303 E. Dry Creek Road, Suite 100
Englewood, Colo.
register.nhcomputerlearning.com/Events/

ISSA Baltimore

May 23
Sparta Inc.
7110 Samuel Morse Drive, 2nd Floor
Columbia, Md.
www.issa-balt.org

JUNE

SpecTECHular 2012

June 7
New Horizons Dallas
150 W. John Carpenter Freeway
Suite 100
Irving, Texas
register.nhcomputerlearning.com/Events/

**AITP
Pittsburgh**

June 11, 5 to 8 p.m.
Silvioni's Restaurant
2125 Babcock Blvd.
Pittsburgh, Pa.
www.aitp-pgh.org

**AITP
Washington, D.C.**

June 14
Alfio's La Trattorio Restaurant
4515 Willard Ave.
Chevy Chase, Md.
www.aitpdc.org

SpecTECHular 2012

June 16
New Horizons Cincinnati
10653 Techwoods Circle
Cincinnati, Ohio
register.nhcomputerlearning.com/Events/

**Organization In Outlook
Made Simple**

June 19, 10 to 11 a.m.
New Horizons South Dakota
4610 Technopolis Drive, Suite 100
Sioux Falls, S.D.
register.nhcomputerlearning.com/Events/

**AITP
Atlanta**

June 21, 5:30 to 8 p.m.
Crowne Plaza Ravinia
4355 Ashford Dunwoody Road
Atlanta, Ga.
www.aitpatlanta.org

**AITP
Akron**

June 26
Akron, Ohio
www.akron-aitp.org

ISSA Baltimore

June 27
Sparta Inc.
7110 Samuel Morse Drive, 2nd Floor
Columbia, Md.
www.issa-balt.org

SpecTECHular 2012

June 28
New Horizons Dayton
1890 Commerce Center
Fairborn, Ohio
register.nhcomputerlearning.com/Events/

JULY

**AITP
Pittsburgh**

July 9, 5 to 8 p.m.
Silvioni's Restaurant
2125 Babcock Blvd.
Pittsburgh, Pa.
www.aitp-pgh.org

**AITP
Washington, D.C.**

July 12
Alfio's La Trattorio Restaurant
4515 Willard Ave.
Chevy Chase, Md.
www.aitpdc.org

SpecTECHular 2012

July 17
New Horizons Fort Worth
4100 International Plaza
Suite 200
Fort Worth, Texas
register.nhcomputerlearning.com
/Events/

SpecTECHular 2012

July 24
New Horizons San Antonio
2727 NW Loop 410
Suite 103
San Antonio, Texas
register.nhcomputerlearning.com
/Events/

**SQL Coding Best Practices
and Shortcuts**

July 24, 9 to 11 a.m.
New Horizons
South Dakota
4610 Technopolis Drive
Suite 100
Sioux Falls, S.D.
register.nhcomputerlearning.com
/Events/

**ISSA
Baltimore**

July 25
Sparta Inc.
7110 Samuel Morse Drive
2nd Floor
Columbia, Md.
www.issa-balt.org

SPTechCon

July 25
Boston, Mass.
www.sptechcon.com

AUGUST

**AITP
Washington, D.C.**

Aug. 9
Alfio's La Trattorio Restaurant
4515 Willard Ave.
Chevy Chase, Md.
www.aitpdc.org

SpecTECHular 2012

Aug. 9
New Horizons Kansas City
9611 E. Metcalf Ave.
Overland Park, Kansas
register.nhcomputerlearning.com
/Events/

**AITP
Pittsburgh**

Aug. 13, 5 to 8 p.m.
Silvioni's Restaurant
2125 Babcock Blvd.
Pittsburgh, Pa.
www.aitp-pgh.org

SpecTECHular 2012

Aug. 21
New Horizons Oklahoma City
3010 NW 149th St.
Oklahoma City, Okla.
register.nhcomputerlearning.com
/Events/

ISSA Baltimore

Aug. 22
Sparta Inc.
7110 Samuel Morse Drive
2nd Floor
Columbia, Md.
www.issa-balt.org

SpecTECHular 2012

Aug. 28
New Horizons South Dakota
4610 Technopolis Drive
Suite 100
Sioux Falls, S.D.
register.nhcomputerlearning.com
/Events/

SEPTEMBER

AITP Pittsburgh

Sept. 10, 5 to 8 p.m.
Silvioni's Restaurant
2125 Babcock Blvd.
Pittsburgh, Pa.
www.aitp-pgh.org

AITP Washington, D.C.

Sept. 13
Alfio's La Trattorio Restaurant
4515 Willard Ave.
Chevy Chase, Md.
www.aitpdc.org

ISSA Baltimore

Sept. 19
Sparta Inc.
7110 Samuel Morse Drive
2nd Floor
Columbia, Md.
www.issa-balt.org

AITP Akron

Sept. 25
Akron, Ohio
www.akron-aitp.org

Data Center World

Sept. 30-Oct. 3
Gaylord Opryland
Nashville, Tenn.
www.afcom.com

OCTOBER

Interop New York

Oct. 1-5
Javits Convention Center
New York, N.Y.
www.interop.com

AITP Pittsburgh

Oct. 8, 5 to 8 p.m.
Silvioni's Restaurant
2125 Babcock Blvd.
Pittsburgh, Pa.
www.aitp-pgh.org

AITP Washington, D.C.

Oct. 11
Alfio's La Trattorio Restaurant
4515 Willard Ave.
Chevy Chase, Md.
www.aitpdc.org

ISSA Baltimore

Oct. 24
Sparta Inc.
7110 Samuel Morse Drive
2nd Floor
Columbia, Md.
www.issa-balt.org

WPDevCon

Oct. 24
San Francisco, Calif.
www.wpdevcon.net

**AITP
Akron**

Oct. 30
Akron, Ohio
www.akron-aitp.org

NOVEMBER

**AITP
Washington, D.C.**

Nov. 8
Alfio's La Trattorio Restaurant
4515 Willard Ave.
Chevy Chase, Md.
www.aitpdc.org

AITP Pittsburgh

Nov. 12, 5 to 8 p.m.
Silvioni's Restaurant
2125 Babcock Blvd.
Pittsburgh, Pa.
www.aitp-pgh.org

ISSA Baltimore

Nov. 28
Sparta Inc.
7110 Samuel Morse Drive
2nd Floor
Columbia, Md.
www.issa-balt.org

DECEMBER

Android DevCon IV

Dec. 7
San Francisco, Calif.
www.andevcon.com

AITP Pittsburgh

Dec. 10, 5 to 8 p.m.
Silvioni's Restaurant
2125 Babcock Blvd.
Pittsburgh, Pa.
www.aitp-pgh.org

AITP Washington, D.C.

Dec. 13
Alfio's La Trattorio Restaurant
4515 Willard Ave.
Chevy Chase, Md.
www.aitpdc.org

ISSA Baltimore

Dec. 19
Sparta Inc.
7110 Samuel Morse Drive
2nd Floor
Columbia, Md.
www.issa-balt.org

Do you have an event you'd like to see listed?
Send an email to feedback@processor.com.

Security Concerns With Used Equipment

Be Smart About What & Where You Buy To Prevent Security Breaches

WHEN IT COMES TO used or refurbished equipment, much attention is given to the quality of the preowned equipment and how much it will cost to maintain it, and rightly so. However, there is another factor that deserves just as much—or more—attention: security. Here is a look at how both buyers and sellers of used and refurbished equipment can sidestep security problems.

Start with a clean slate. When it comes to used or refurbished equipment, whether you’re buying it from someone else or selling your own, you must make sure that it has been wiped clean so as to avoid costly security breaches and data loss.

“A lot of companies selling off their excess IT assets worry about the data that is left over on those systems. They are concerned with making sure that all of the proprietary information stored on those systems is wiped before they

re-enter the market,” says Benjamin Yampolsky, director of IT at Aventis (www.aventissystems.com). “However, the same companies show little concern when buying refurbished computers. It is important to make sure the second-hand equipment entering the enterprise has gone through the process of being wiped and reset to factory defaults so as not to leave access holes.”

Used and refurbished are not the same. Properly refurbishing equipment requires a number of steps, Yampolsky says. “Many companies that sell off-lease, used, or excess inventory gear are not familiar with the refurbishing process,” he says. “The label ‘refurbished’ is not synonymous with ‘used.’ ‘Refurbished’ means that the item has been restored to factory settings, with no trace of the previous user’s data. This includes doing a secure erase on all hard and flash drives,

wiping the configuration in the various low-level firmware of the product, as well as doing extensive testing to confirm the product is operational per original factory standards.”

Beware of unwelcome surprises. There is a remote but realistic chance that the equipment you’re buying is a Trojan horse of sorts, equipped to provide outside parties with your sensitive data.

“A great number of the computer and laptop tracking software that is currently on the market will not get destroyed in a format and OS reinstall,” says Lenny Fuchs, principal of consultancy firm My IT Department. “Most allow root-level access to the computer.”

Fuchs says keyloggers or other software can be used to track the location of the owner and even perform nefarious acts such as deleting the contents of the hard drive.

“On the purchasing side, there is a risk that used media contains malware,” adds Joe Fisher, president of Affinity IT Training. “It would be wise to scan refurbished drives using the latest anti-virus software, especially if [the drives] are used to boot the machine.”

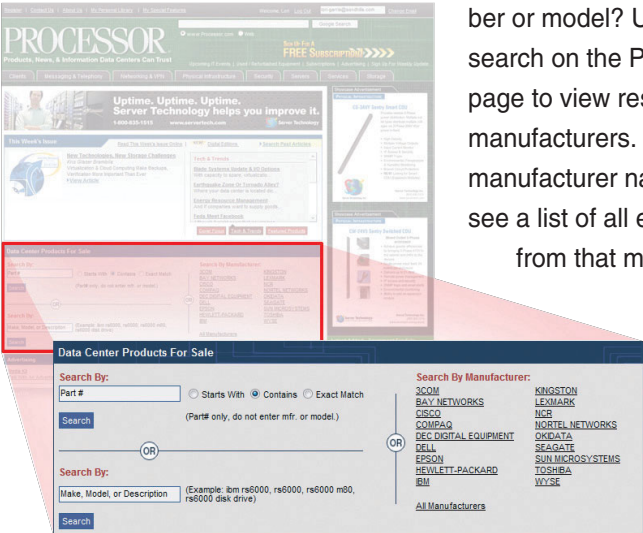
“You never really know how a piece of IT equipment has been used—or abused,” Fuchs says.

Look for certified equipment. According to Yampolsky, one of the best things you can do when looking for used or refurbished equipment is to look for gear that’s certified by its original manufacturer; for example, if you’re looking for Cisco gear, look for a Cisco-certified shop or product. “A lot of resellers may tout their staff’s CompTIA certifications, but those are not specific enough to confirm the seller has qualified personnel who know what they are doing,” he says. **P**

USE PROCESSOR.COM TO FIND USED & REFURBISHED EQUIPMENT

Once you've made the decision to purchase used or refurbished equipment, finding the equipment you need is easy with Processor's online Data Center Products For Sale Database.

From Processor's home page (www.processor.com), you can search for a specific part number, make, model, or description. Enter the information in the appropriate box and click Search. You'll see a list of available equipment. If you don't see the particular piece you're looking for, scroll to the bottom of the search results page to conduct a more detailed search. There, you can search by part number, model, price, location, and more.



Don't know the specific part number or model? Use the drill-down search on the Processor home page to view results from specific manufacturers. Simply click the manufacturer name, and you'll see a list of all equipment listings from that manufacturer.

Do you have excess equipment?
Post it for sale on Processor.com!

On the Processor.com home page,
click Used/Refurbished Equipment.



Choose
Post A Free
For-Sale Listing.

- Search For-Sale Listings
- Find Vendors
- Post A Free Want-To-Buy
- Post A Free For-Sale Listing
- View Want To Buys

Follow the on-screen directions from there!

Looking For The Latest Way To Stay Up To Date With Processor?



Follow us on:

Facebook – ProcessorPub

Twitter – @ProcessorPub

Google – +Processor

LinkedIn – Processor Publication

Call (800) 334-7458 to subscribe to *Processor* or go to www.processor.com to read articles and view thousands of products online free of charge to qualified readers.



Processor Solutions Directory

Here are brief snapshots of several companies offering products designed for the data center and IT industry. Listings are sorted by category, making it easy for you to find and compare companies offering the products and services you need.

You can find more detailed information on these companies and the products they offer inside this issue.

To list your company and products,
call (800) 247-4880.

PHYSICAL INFRASTRUCTURE




Based in New York City, Hergo Ergonomic Support Systems is an independent designer and manufacturer of enclosure cabinet solutions, technical computer furniture, and modular racking systems. The company's products are designed to promote organization in the workspace and to increase the productivity of computers, peripherals, and communications equipment. Hergo is known for its high-quality products and superior customer service.

Products Sold:

- Racks
- Enclosures/cabinets
- Motorized workstations
- Flat-panel arms
- Computer desks
- Cable management
- Power management

(888) 222-7270 | www.hergo.com

PHYSICAL INFRASTRUCTURE




AVTECH Software, founded in 1988, is focused on making the monitoring and management of systems, servers, networks, and data center environments easier. AVTECH provides powerful, easy-to-use software and hardware that saves organizations time and money while improving operational efficiency and preparedness. AVTECH products use advanced alerting technologies to communicate critical status information and can perform automatic corrective actions.

Products Sold:

A full range of products that monitor the IT and facilities environment, including temperature, humidity, power, flood, room entry, and UPS

(888) 220-6700 | www.AVTECH.com

PHYSICAL INFRASTRUCTURE



Sensaphone has been designing and manufacturing remote monitoring systems for more than 25 years and has more than 300,000 of its products in use. Sensaphone's product lineup offers a full range of devices with a broad number of features and applications designed to monitor your entire infrastructure and alert you to changes. All product engineering functions, including hardware and software design and circuit board layout and assembly, are performed at the Sensaphone facility in Aston, Penn.

Products Sold:

Remote monitoring solutions that provide email and voice alarm notification for problems related to temperature, humidity, water detection, power failure, and more.

(877) 373-2700 | www.sensaphone.com

PHYSICAL INFRASTRUCTURE




Rackmount Solutions' mission is to listen to the IT engineer's specific needs and deliver superb-quality, high-performance products through continuous product innovation and operational excellence. We pride ourselves in providing quality customer service, products that fit your IT requirements, and solid value for your money.

Products Sold:

- Wallmount and server racks and cabinets, including sound proof, air conditioned, and large cable bundle
- Desktop/tabletop portable racks
- Shockmount shipping cases
- Bulk cable

(866) 207-6631 | www.rackmountsolutions.net

PHYSICAL INFRASTRUCTURE




BayTech was founded in 1976 and, since the 1990s, has developed unique products for remote power management. The company uses printed circuit board instead of wires for a better, more resilient connection between the data center equipment and the receptacle. BayTech provides an extensive Web site with brochure downloads, warranty information, and reseller support and also offers evaluation units for data centers.

Products Sold:

- Power control, distribution, management, and metering
- Power transfer switches
- Console management and remote site management

(800) 523-2702 | www.baytech.net

PHYSICAL INFRASTRUCTURE



Crenlo offers a broad range of standard enclosure and console product lines under their Emcor brand, each of which can be configured or modified by Crenlo to meet the specific requirements of most customers. Crenlo also offers completely custom enclosure solutions to meet the specific requirements of any application. Crenlo has more than 60 years of experience providing enclosure solutions to meet the needs of their diverse customer base.

Products Sold:

- Rackmount and wallmount enclosures
- Transit cases
- Rackmount accessories
- Monitoring and command and control consoles
- Custom enclosures ranging from kiosks to inverter enclosures

(507) 287-3535 | www.crenlo.com/enclosures

PHYSICAL INFRASTRUCTURE




Staco Energy was founded in 1937 and is one of the longest-lasting innovators of power products and services in the world. Our recent innovations have created the foundation for entry into the SMB data center marketplace through pioneered design and expertise. We are committed to providing you with the best tailored power solutions for your needs.

Products Sold:

A full line of UPS products, including our new FirstLine P 65 – 250kVA UPS, FirstLine PL 10 – 100kVA UPS, FirstLine BMS, and related accessories and services.

(866) 261-1191 | www.stacoenergy.com

PHYSICAL INFRASTRUCTURE




PDUdirect.com is a Master Distributor of select Server Technology PDUs for server and networked environments. PDUdirect's basic, metered, and switched Rack PDUs provide local and remote power management, power monitoring, and environmental monitoring. We pride ourselves in offering industrial-grade quality products at the lowest prices, with the fastest shipping (most orders shipped within 24 hours) and simplest purchase process. We are the Power Behind the Business.

Products Sold:

A complete line of metered and basic PDUs, and 20A switched PDUs.

(888) 751-7387 | pdudirect.com

PHYSICAL INFRASTRUCTURE



Upsite, the "Pioneering Company in Airflow Management Solutions" was founded by Ken Brill, who established the Uptime Institute, a think tank dedicated to identifying efficiencies within data centers. Upsite's LOK Family of energy-efficient solutions are engineered to optimize the data center. This sets Upsite apart. Upsite solutions empower data center managers to leverage cost savings for data center optimization (i.e. releasing stranded capacity, increasing server density, improving system reliability & reducing energy consumption).

Products Sold:

- KoldLok
- HotLok
- AisleLok
- EnergyLok

(505) 798-0200 or (888) 982-7800 | www.upsite.com

PHYSICAL INFRASTRUCTURE




Since 1979, Simplex Isolation Systems has been setting new design standards in modular expandable cleanroom components, isolation curtains, hardware, and new product development. Fontana, Calif.,-based Simplex's unique strip doors and mounting systems are designed for quick installation. Simplex parts and materials perform with optimum efficiency, last longer, and save you money. And with Simplex, you are always backed by industry expertise, product knowledge, and the best warranties in the market.

Products Sold:

- Cleanrooms
- Strip doors
- Enclosures
- Curtains

(877) 746-7540 | www.simplexisolationssystems.com

PHYSICAL INFRASTRUCTURE



Server Technology is committed to the PDU market with the largest group of engineers dedicated to power distribution and other solutions within the equipment cabinet. Advancements in device power monitoring help data centers monitor and improve their efficiency, and continuous research and development is fueled by companies that look to Server Technology for their custom cabinet power solutions.

Products Sold:

A complete line of cabinet PDUs, including Per Outlet Power Sensing (POPS), Rack Mount Fail-Safe Transfer Switch, Console Port access with remote power management, Switched, Smart, Metered, Basic, and -48 VDC

(800) 835-1515 | www.servertech.com

STORAGE




WeBuyUsedTape has been in the business of purchasing new, used, excess, and surplus magnetic media for more than 35 years. Our regulation-approved, secure data eradication processes and environmentally friendly disposal programs give organizations a safe and economic incentive for recycling used media. Customer service is one of our top priorities, backed by helpful, knowledgeable, and efficient team members. Obtain a no-obligation, confidential quote on your tape media today. Onsite data destruction available.

Services Offered:

Tape media buyback, secure data eradication, media disposal, and recycling

(800) 821-1782 | www.WeBuyUsedTape.net

STORAGE



Founded in 1991, Aberdeen is a leading manufacturer of servers and storage options for IT departments. Aberdeen products can be found in many of today's high-tech corporations, as well as government agencies, hospitals, and universities. Aberdeen prides itself on unmatched customer service, open and honest communications, long-term commitments to working relationships, and personal and professional integrity.

Products Sold:

- Components/parts
- Servers (barebones, custom, rackmount, and storage)
- Software
- Storage (DAS, iSCSI SAN, JBOD, NAS, SAN)

(800) 500-9526 | www.aberdeeninc.com

SECURITY



Milton Security Group LLC is at the forefront of new developments in network security technology that provide the framework in the most demanding security environments worldwide. We guide our customers to success in an information-driven world by supplying exceptional customer service, delivering top-notch products and engaging partner programs. Milton Security Group is a Veteran-Owned Small Business security company with a consulting practice.

Products Sold:

- Access control and security scanning
- Network management

(888) 674-9001 | www.miltonsecurity.com

SERVERS




Supermicro® (NASDAQ: SMCI), the leading innovator in high-performance, high-efficiency server technology, is a premier provider of advanced server Building Block Solutions® for enterprise IT, data center, cloud computing, HPC, and embedded systems worldwide. Supermicro is committed to protecting the environment through its "We Keep IT Green®" initiative by providing customers with the most energy-efficient, environmentally-friendly solutions available on the market.

Products Sold:

- Servers
- Network switches
- GPU servers
- Motherboards
- Storage solutions
- Embedded
- Chassis
- Blade servers

(408) 503-8000 | www.supermicro.com

EQUIPMENT DEALER



Digiliant is a Michigan-based company that was founded on more than 17 years of experience of computer hardware support and custom server designs to provide Network Storage Solutions to meet the needs of today's growing businesses. Our Network Attached Storage (NAS) systems and iSCSI SAN solutions provide a much more simple, yet powerful platform to meet the high demands of File Serving and Data Storage.

Products Sold:

- Chasses from towers to rack mount units from 1U all the way to 8U, which allows for capacities of up to 243 Terabytes of data storage running Microsoft Windows Storage Server 2008 R2 and Linux Solutions.

(800) 306-2199 | www.digiliant.com/pcm

EQUIPMENT DEALER



xByte Technologies is a premier reseller of Dell and IBM IT equipment with a history of serving the needs of Data Centers for over 10 years.

The xByte Difference:


- Servers and Parts in less than 24 hours
- Genuine Parts and Certified Technicians
- No Hassle Next Business Day Warranty
- No Questions Asked Returns
- Save 20-60%

Products Sold:

- Dell and IBM
- Servers, Storage, and Parts
- Trade in your old hardware

(888) 929-8348 | www.xbyte.com

CLIENTS



Maryland-based dtSearch started research and development in text retrieval in 1988. The company is known for speedy adoption of new programming standards, OSes, and file types. Plus, it has a flexible licensing model. Typical corporate use of dtSearch includes general information retrieval, Internet and intranet site searching, and email archiving and email filtering.

Products Sold:

Text retrieval products, including:

- Desktop With Spider
- Web With Spider
- Network With Spider
- Engine For Win & .NET
- Publish For CD/DVDs
- Engine For Linux

(800) 483-4637 | www.dtsearch.com

EQUIPMENT DEALER




At Information Technology Trading, our goal is to help you acquire the right hardware or software solution. We specialize in purchasing and reselling data-processing equipment and have more than 21 years combined experience. We provide services and system upgrades, DASD, communication, and memory. We're also an outlet for off-lease portfolios.

Products Sold:

- AS400, Advanced System/36, R/S6000, ES/9000, and PC systems (including lease and rental)
- CPUs, memory, disks, tapes, displays, and controllers
- Services, including system design and installation, maintenance, and buyback of existing hardware

(877) 715-3686 | www.itechtrading.com

EQUIPMENT DEALER



- PaceButler buys used cell phones.
- In business since 1987
- Redeploy your used phones after upgrade
- Donation option – directly to the non-profit of your choice
- Dedicated to customer satisfaction
 - A+ Rating with the Better Business Bureau
 - Payment issued in four days
- Dedicated to employee development
 - Book reading program
 - Health and fitness programs

Products Sold:

We buy used cell phones & PDAs, including Apple, LG, Blackberry, HTC, Motorola, Nextel, Nokia, PalmOne & Samsung.

(800) 248-5360 | www.pacebutler.com

PROCESSOR

Subscribe Today!

Call (800) 334-7458

Subscribe Online!

Go to www.processor.com



A unique twist.



At Crenlo, our engineers are idea generators who work collaboratively with you to support any stage of your product development — from concept to production. We are experts in all factors important to protecting your electronics, including thermal management, seismic compliance, EMI/RFI shielding, corrosion protection, shock and vibration attenuation, and more. At Crenlo, we see enclosures differently.

Crenlo offers:

- **Emcor® enclosures** – This standard product lineup includes a range of vertical racks, which can be configured or modified with numerous accessories and sizes to meet your diverse needs.
- **Emcor® consoles** – This standard product lineup includes a range of monitoring and control consoles, which can be configured and modified in countless modular configurations.
- **Crenlo® custom products** – For those needs that fall outside of Crenlo’s standard Emcor products, we can build completely custom solutions to meet the needs of any customer.

507-287-3535 | www.crenlo.com/enclosures/twist



We see enclosures differently.™



© 2012 Crenlo Cab Products, Inc. All Rights Reserved. Crenlo® and the Crenlo® Logo are registered trademarks in the United States (and various other countries) of Crenlo Cab Products, Inc.

© 2012 Emcor Enclosures, Inc. All Rights Reserved. Emcor® is a registered trademark in the United States (and various other countries) of Emcor Enclosures, Inc.